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REPORT OF THE AMERICAN BISON SOCIETY

1905 - 1907

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"America," I heard a voice complain,
"The first-born children of your broad domain,
The nurselings of your prairies vast and broad,
Look to them—they were given you of God,
And what He gives He will not give again."

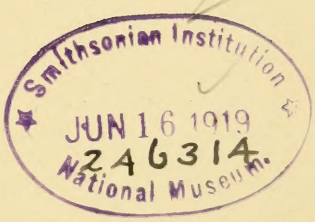
—John Hall Wheelock.

ANNUAL REPORT

OF THE

AMERICAN BISON SOCIETY

1905-1907



OBJECT:

THE PERMANENT PRESERVATION AND INCREASE OF THE AMERICAN BISON

PUBLISHED BY THE SOCIETY
1908

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OFFICERS OF
THE AMERICAN BISON SOCIETY
1908-1909

Hon. President, Hon. THEODORE ROOSEVELT, President of the United States.

Hon. Vice-President, His Excellency EARL GREY, Governor-General of Canada.

President, WILLIAM T. HORNADAY, Director New York Zoological Park.

Vice-Presidents, { A. A. ANDERSON, President of the Camp-fire Club of America.
Prof. FRANKLIN W. HOOPER, Director of Brooklyn Institute Arts and Sciences.

Secretary, ERNEST HAROLD BAYNES, "Sunset Ridge," Meriden, N. H.

Treasurer, CLARK WILLIAMS, Columbia Trust Company, New York.

BOARD OF MANAGERS

A. A. ANDERSON . . . . . 80 West 40th Street, New York
ERNEST HAROLD BAYNES . . . . . Meriden, N. H.
HERBERT L. BRIDGMAN . Sec'y Peary Arctic Club, Brooklyn, N. Y.
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Director Biological Station, Carnegie Institution, Cold Spring Harbor, L. I.
Prof. MORTON J. ELROD . . University of Montana, Missoula, Mont.
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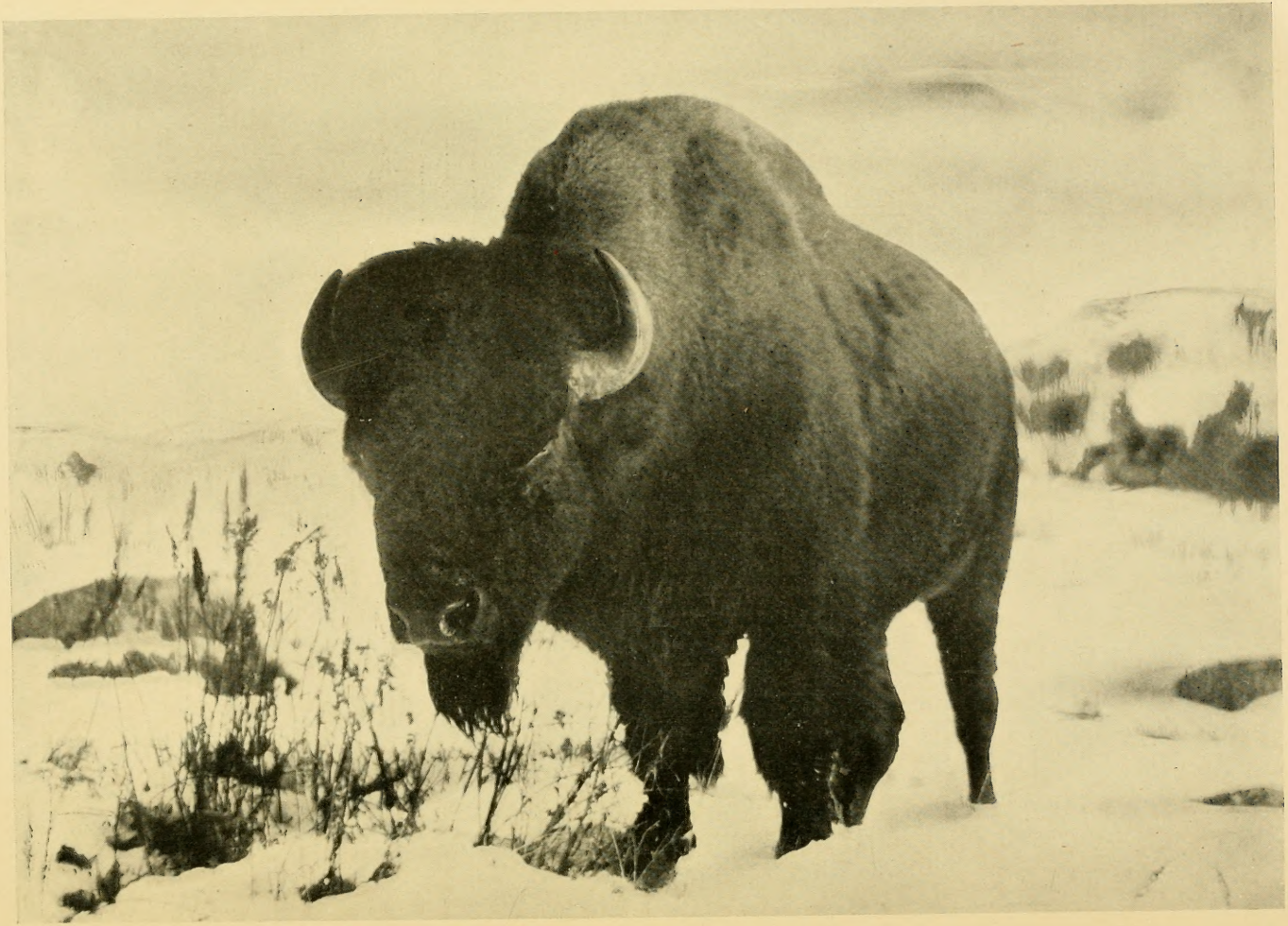
WILLIAM LYMAN UNDERWOOD,
Massachusetts Institute of Technology, Boston, Mass.
Hon. JAMES S. WHIPPLE,
N. Y. State Forest, Fish and Game Commissioner, Albany, N. Y.
CLARK WILLIAMS . . Care of Columbia Trust Company, New York
Prof. CALVIN M. WOODWARD . Washington University, St. Louis, Mo.



THE KING OF THE CORBIN HERD.

HISTORY AND PROCEEDINGS OF THE SOCIETY.

THE national movement now on foot for the permanent preservation of the Buffalo began in June, 1904, when Mr. Ernest Harold Baynes went to live on the border of the Corbin Game Preserve in New Hampshire, which for many years has been the home of one of the largest herds of Buffalo in the world. The sight of these splendid creatures made a deep impression on Mr. Baynes, and excited his interest in the fate of their race, then in great danger of becoming extinct. He sought to create public interest in the matter by a series of articles printed in the Boston "Transcript" that summer, and in August was aroused to greater activity by a letter written by Hon. William E. Chandler and addressed to Hon. James Wilson, Secretary of Agriculture. In this letter Mr. Chandler called the attention of the United States Government to the fact that, while the owners of the preserve desired to carry out as far as possible the intention of the founder, the late Austin Corbin, and preserve the Buffaloes, the ever-increasing expense of maintaining so large a herd (then numbering 160 head) was already too great to be borne by a private family. Mr. Chandler intimated that unless the Government was sufficiently interested in the matter to provide for or take other "steps to preserve them permanently," it might be necessary to dispose of them elsewhere.

Early in the fall Mr. Baynes visited Prof. Franklin W. Hooper, Director of the Brooklyn Institute of Arts and Sciences, at his home in Walpole, N. H., and with him discussed the possibility of arousing wide public interest in the Buffalo. At Professor Hooper's suggestion, letters were written to many prominent persons, including President Roosevelt, urging them to interest themselves in the fate of the vanishing Bison. President Roosevelt took immediate and active interest in the subject, as is evidenced by the following letter:—

White House, Washington.

OYSTER BAY, N. Y., Sept. 16, 1904.

Personal.

My dear Mr. Baynes:—

I am much impressed with your letter, and I agree with every word you say. I remember you well. I have written Secretary Wilson, sending him your letter and requesting him to take the matter up with me, and I shall treat of it in my annual message.

With great regard, Sincerely yours,

THEODORE ROOSEVELT.

Mr. Ernest Harold Baynes,
Cornish Flat, N. H.

Then followed a series of some forty articles on the Buffalo, some illustrated and published in the magazines, but most of them syndicated and printed simultaneously in about twenty of the leading newspapers in different parts of the country. The press was sympathetic and generous, and these articles were the subjects of many editorials favorable to the cause of Bison preservation.

On Jan. 18, 1905, Mr. Baynes delivered before the Boston Society of Natural History an illustrated lecture entitled "The American Buffalo—A Plea for His Preservation." On the day after the lecture several gentlemen who had become interested met informally and discussed plans for the organization of a society which should have for its object the preservation of the Buffalo. Most of those present are now members of the American Bison Society, and some of them are among its most active workers.

The above lecture was repeated before the Brooklyn Institute of Arts and Sciences, the Camp-Fire Club of America, the Harvard Travelers' Club, the Boone and Crockett Club, and many other organizations. At the Camp-Fire Club Mr. Baynes talked over with its President, Mr. William T. Hornaday, the advisability of organizing the proposed society, and Mr. Hornaday agreed that if the society were organized he would accept its presidency. Later, President Roosevelt was invited to

become the Honorary President, and, on his acceptance, arrangements were made for organization.

A meeting was called for the 8th of December, 1905, and notices were sent to about two hundred persons known to be interested in the fate of the Buffalo. Of these, fourteen assembled in the Lion House of the New York Zoological Park, and organized The American Bison Society. These fourteen persons were:—

A. A. Anderson, 80 West 40th St., New York.

Robert C. Auld, New York City.

Ernest Harold Baynes, Meriden, N. H.

Edward Cave, Editor of "Field and Stream," New York City.

Prof. Franklin W. Hooper, Director of the Brooklyn Institute of Arts and Sciences.

William T. Hornaday, Director of the New York Zoological Park.

Frederic H. Kennard, 220 Devonshire St., Boston, Mass.

Francis Piper, Arlington Heights, Mass.

Mrs. Francis Piper, Arlington Heights, Mass.

Harry V. Radford, Editor of "Woods and Waters," New York City.

Martin Schenck, Chief Engineer Department of Parks, Borough of the Bronx, New York.

G. O. Shields, Editor of Shields' Magazine, New York City.

C. H. Stonebridge, 148th St. and Third Ave., New York City.

Charles H. Townsend, Director of the New York Aquarium.

When the meeting was called to order, Messrs. Hornaday and Baynes were elected temporary chairman and temporary secretary respectively. A nominating committee appointed by the chair, presented a report, and the following persons were elected officers of the Society:

Honorary President, Hon. Theodore Roosevelt; President, William T. Hornaday; Vice-Presidents, A. A. Anderson and Dr. Charles S. Minot; Secretary, Ernest Harold Baynes, and Treasurer, Edmund Seymour.

An Advisory Board was elected, consisting of the following persons: Prof. Franklin W. Hooper, Prof. David Starr Jordan, Prof. Morton J. Elrod, Prof. L. L. Dyche, Prof. John H. Gerold, William Lyman Underwood, Madison Grant, Ernest Thompson Seton and Frederic H. Kennard.

The President was empowered to appoint an Executive Committee of seven men, to include the President and Secretary. He appointed Messrs. Frederic H. Kennard and William Lyman Underwood, of Boston; Madison Grant and W. T. Hornaday, of New York; Mr. Gifford Pinchot and Dr. T. S. Palmer, of Washington, D. C., and E. H. Baynes.

The Executive Committee was instructed to draft a Constitution.

Professor Hooper suggested that since there were several herds of Buffalo in Canada, including the only wild herd of any size in existence, the Canadians would doubtless be much interested in the Society, and should be invited to join hands with the people of the United States in this effort to preserve an animal common to both countries. He moved that the Premier of Canada be invited to hold office in the Society, and accepted Mr. Radford's amendment that the invitation be extended to the Governor-General of Canada also.

SPECIAL MEETING OF THE SOCIETY.

A special meeting of the American Bison Society was held at the New York Zoological Park, in the office of Director W. T. Hornaday, on the 2d of February, 1906.

President Hornaday was in the chair. Others present were Prof. Franklin W. Hooper, C. J. Jones ("Buffalo" Jones), Dr. T. S. Palmer, Frederic H. Kennard and Ernest Harold Baynes.

The Secretary read many letters concerning the preservation of the Buffalo from well-known authorities in different parts of the country. These letters were written in answer to a series of questions recently sent out by Mr. Hornaday, and the correspondents agreed that it was possible to save the Buffalo from extinction, and that the only sure way to accomplish its preservation was by estab-

lishing a number of buffalo herds in widely-separated parts of the country.

At this meeting the Constitution was adopted and, in accordance with its provisions, the following Board of Managers was elected:—

For two years.—A. A. Anderson, Ernest Harold Baynes, Franklin W. Hooper, W. T. Hornaday, Frederic H. Kennard, Charles S. Minot, T. S. Palmer, Gifford Pinchot and Edmund Seymour.

For one year.—L. L. Dyche, Morton J. Elrod, John H. Gerould, Madison Grant, C. J. Jones, David Starr Jordan, A. Bowen Perry, Ernest Thompson Seton and William Lyman Underwood.

A. Bowen Perry, Esq., of Regina, Canada, is Commissioner of Royal Northwest Mounted Police, and his name was sent to the Secretary by His Excellency, Earl Grey, Governor-General of Canada, who had been requested to suggest a Canadian to serve on the Governing Board of the American Bison Society.

MEETING OF THE BOARD OF MANAGERS.

After the adjournment of the general meeting, the Board of Managers met and elected the following officers for the year 1906:—

Honorary President, Hon. Theodore Roosevelt, President of the United States; Honorary Vice-President, His Excellency Earl Grey, Governor-General of Canada; President, William T. Hornaday; Vice-Presidents, A. A. Anderson and Charles S. Minot; Secretary, Ernest Harold Baynes; Treasurer, Edmund Seymour.

FIRST ANNUAL MEETING OF THE AMERICAN BISON SOCIETY.

The first annual meeting of the American Bison Society was held on the 10th of January, 1907, at the American Museum of Natural History, West 79th St. and Central Park West, New York City.

President William T. Hornaday was in the chair. The others present were: Herman C. Bumpus, Franklin W. Hooper, Frederic A. Lucas, Edmund Seymour,

Austin Corbin, George S. Edgell, William Lyman Underwood, Frederic H. Kennard, Charles H. Stonebridge and Ernest Harold Baynes.

The Secretary read a report, in which he reviewed the work of the Society during the past year. He showed that that work had been chiefly educational in its nature, consisting largely in the publishing of many newspaper and magazine articles in the United States, Canada, and England, and in giving numerous free lectures on the subject. He also showed the result of his experimental effort to raise money and secure members for the Society in Worcester, Mass., by means of giving free lectures, securing the support of the newspapers, giving an exhibition of buffalo heads, robes, and other relics, and particularly by means of strong personal letters of introduction to many of the leading people of the city. Fifty new members for the Society and the raising of the sum of $670 had been the immediate result of this effort.

The Secretary briefly mentioned his experiment in rearing Buffalo calves by hand, and in breaking two young males to the yoke and to harness; told how he had exhibited this team on numerous occasions for the purpose of creating interest in the Buffalo, and how on one occasion he had driven one of the young Buffaloes to decisive victory over a domestic steer in a half-mile race at an agricultural fair.

The report also gave an account of the Secretary's experiments with buffalo wool, of which he showed samples, together with yarn spun from the wool and gloves knitted from the yarn. The report included letters from woolen manufacturers expressing the opinion that buffalo wool was very closely akin to sheep's wool; that it was stronger, grade for grade, than the average wool; that for a long time it would demand a high price as a novelty; and, that if it could be obtained in quantity, there would be a good market for it for the manufacture of articles not requiring to be dyed the lighter colors.

The Treasurer's report showed that the total receipts of the Society from dues and subscriptions, with interest on same, amounted to $2,040; that the total expenditures had been $707.53; and that, consequently, the balance in

the bank to the credit of the Society was $1,332.53. The report showed that there were 9 Life Members, 125 Members, and 102 Associate Members.

In submitting his report, Mr. Seymour tendered his resignation as Treasurer, regretting that he was obliged to do so owing to pressure of other business and expected absence from home during the coming year. In resigning, Mr. Seymour suggested that Mr. Clark Williams, Vice-President of the Columbia Trust Company, New York, be elected to fill his place, and requested that a committee be appointed to audit his accounts.

It was decided to have the Flathead and Crow Indian Reservations examined with a view to having suitable portions of them set apart as buffalo ranges. It was further decided to take such steps as might be necessary to establish herds of Buffalo in the Adirondack region, and in Illinois, on public lands, and the Executive Committee was instructed to take steps looking to the establishment of buffalo herds on the forest reserves in New Hampshire and the southern Appalachian region.

The following were elected or re-elected to fill the vacancies occurring on the Board of Managers: Herbert L. Bridgman, Dr. H. C. Bumpus, Madison Grant, C. J. Jones, Prof. David Starr Jordan, A. Bowen Perry, C. H. Stonebridge, Clark Williams, and William Lyman Underwood.

MEETING OF THE BOARD OF MANAGERS.

After the general meeting, the Board of Managers met and elected the following officers:—

Honorary President, Hon. Theodore Roosevelt, President of the United States.

Honorary Vice-President, His Excellency Earl Grey, Governor-General of Canada.

President, William T. Hornaday.

Vice-President, A. A. Anderson and Prof. Franklin W. Hooper.

Secretary, Ernest Harold Baynes.

Treasurer, Clark Williams.

SPECIAL MEETING OF THE BOARD OF MANAGERS.

On February 7, 1907, a special meeting of the Board of Managers was held at the office of Mr. Edmund Seymour, 45 Wall Street, New York, for the purpose of amending Article IV, Section I, of the Constitution, so as to provide for a change in the number of Members of the Board of Managers, from eighteen to twenty-seven. This change was made and the following men were elected to fill the nine vacancies created thereby:—

Prof. Calvin M. Woodward, LL.D., of Washington University, St. Louis, Mo.; Harry W. Smith, of Worcester, Mass.; Commander Robert E. Peary, of Washington, D. C.; Prof. Henry F. Osborn, Ph.D., of the American Museum of Natural History, New York City; John M. Phillips, of Pittsburg, Pa.; Prof. David Starr Jordan, of Leland Stanford University, California; Frederic A. Lucas, Curator-in-Chief of the Museum of the Brooklyn Institute of Arts and Sciences; Dr. Charles B. Davenport, Director of the Biological Station of the Carnegie Institution, Cold Spring Harbor, L. I., and Mr. John E. Thayer, of Boston, Mass.

SECOND ANNUAL MEETING OF THE AMERICAN BISON SOCIETY.

The second annual meeting of The American Bison Society was held in the Board Room of The American Museum of Natural History, 79th Street and Central Park West, New York City, on Thursday morning, January 9th, 1908, at 10:30 o'clock.

President William T. Hornaday was in the chair. The others present were: Miss Amy Townsend, Prof. Franklin W. Hooper, A. A. Anderson, Dr. Herman C. Bumpus, Edmund Seymour, F. A. Lucas, Charles H. Brinsmade, W. G. Langdon, Jr., H. L. Bridgman, Harry V. Radford, C. H. Stonebridge, Joseph E. Buckley and F. D. Tansley, all of New York; H. A. Edwards, of Albany; William Lyman Underwood and Frederic H. Kennard, of Boston, and Ernest Harold Baynes, of Meriden, N. H.

The President, in his report, spoke of the work which had been done by Prof. Morton J. Elrod for the purpose of selecting and recommending a suitable Buffalo range on the Flathead Indian Reservation, in Montana; of an Adirondack Bison Bill; of the shipment of a nucleus herd from New York Zoological Park to the Wichita Forest and Game Preserve in Oklahoma, and of a census of the Bison now existing—all of which matters are treated of elsewhere in detail.

The Secretary read the following letter from President Roosevelt:—

The White House

WASHINGTON, Oct. 24, 1907.

My Dear Mr. Baynes:

I feel real and great interest in the work being done by the American Bison Society to preserve the Buffalo—the biggest of the American big game, probably on the whole the most distinctive game animal of this continent, and certainly the animal which played the greatest part in the lives of the Indians, and which most deeply imprest the imagination of all the old hunters and early settlers. It would be a real misfortune to permit the species to become extinct, and I hope that all good citizens will aid the Society in its efforts for its preservation.

Sincerely yours,

THEODORE ROOSEVELT.

Mr. Ernest Harold Baynes,
Secretary, The American Bison Society,
Meriden, N. H.

The report of the Treasurer, Mr. Clark Williams, was read and ordered printed in full in the Annual Report of the Society.

The report of the Executive Committee showed that during February, March and April of 1907 the Secretary spent several weeks in Boston, lecturing before prominent societies and clubs, writing for the newspapers, and otherwise interesting the people of the city in the fate of the Buffalo. Many new memberships and subscriptions were secured.

At the Sportsmen's Show, held in Mechanics' Building, Boston, April 1st to 13th, under the auspices of the New England Forest, Fish and Game Association, the American Bison Society had a large and interesting exhibition, which attracted more attention than any other in the hall. The principal exhibits were six living Buffaloes, two grand old bulls, two two-year-olds, and two calves of the previous spring, all loaned by the Blue Mountain Forest Association, of Newport, N. H., which also loaned an interesting collection of buffalo robes, buffalo heads and skulls and buffalo hoofs. Our President, Mr. William T. Hornaday, contributed a most interesting and unique collection of buffalo horns, all from wild Buffalo shot on the plains—a series ranging from the straight spikes of a yearling, to the peeling "stubs" of bulls twenty years old or older. Mr. Hornaday also loaned the well-mounted head of a young Buffalo bull.

With the exception of the living Buffaloes, perhaps no exhibit attracted so much attention as a collection of lithographs after George Catlin, illustrating the life of the Buffalo in early times, especially in its relation to the North American Indian. This collection, loaned by Dr. Townsend W. Thorndike, of Boston, was surrounded by visitors from the beginning to the close of the show. Dr. Thorndike also loaned a number of old guns, powder horns, etc., which had been used by Indians and which had been repaired with buffalo hide.

A quantity of buffalo wool, with yarn spun from the same material, and warm garments knitted from the yarn, was exhibited by the Secretary, who also loaned a collection of enlarged photographs of Buffaloes.

Among the other exhibits were a collection of buffalo robes, loaned by Messrs. Ordway, Loring and Ricker, of Boston; a lariat, twisted from the long coarse hair of the buffalo's head and fore legs, loaned by E. W. Deming, the animal painter, and a splendid buffalo carriage robe, contributed by W. D. Chandler, of Concord, N. H.

The exhibition, which was in charge of the Secretary, was a success in every way. One of the immediate results was an increased membership for the Society, about one hundred new members of all classes being secured during

the two weeks of the show. The financial result was a net profit to the Society of $207.98. Incidentally, the exhibition attracted the attention of thousands of people, nearly all of whom were more or less interested in the movement to preserve the Buffalo, and assisted in the distribution of circulars setting forth the Society's purposes and appealing to the American public to aid in the work of preserving the Buffalo from extinction.

The Executive Committee was authorized to raise a special fund with which to purchase Buffaloes or to procure Buffaloes by other means, if possible, to be placed on any state or government lands, provided the maintenance of the animals is assured by state or nation.

The following persons were elected to fill the nine vacancies occurring on the Board of Managers: A. A. Anderson, Prof. Franklin W. Hooper, Dr. William T. Hornaday, Frederic H. Kennard, Hon. James S. Whipple, Gifford Pinchot, Edmund Seymour, Dr. T. S. Palmer, and Ernest Harold Baynes.

SECOND ANNUAL MEETING OF THE BOARD OF MANAGERS.

After the general meeting, the Board of Managers met and elected the following officers for 1908:—Honorary President, Hon. Theodore Roosevelt, President of the United States; Honorary Vice-President, His Excellency Earl Grey, Governor-General of Canada; President, William T. Hornaday; Vice-Presidents, A. A. Anderson, Franklin W. Hooper; Secretary, Ernest Harold Baynes; Treasurer, Clark Williams, care of Columbia Trust Company, New York.

The following persons were elected members of the Executive Committee: William T. Hornaday, Madison Grant, Frederic H. Kennard, William Lyman Underwood, Gifford Pinchot, Dr. T. S. Palmer and Ernest Harold Baynes.

It was decided to have the American Bison Society incorporated.

It was also decided to hold a midsummer meeting of the Society at Newport, N. H., where the members would have an opportunity to inspect the Blue Mountain Forest

Buffalo herd, now one of the largest in the world.

The Secretary was authorized to visit the Buffalo herds of the West, for the purpose of obtaining exact information concerning them.

A committee was appointed to prepare a relief map of North America, on which should be indicated the former range of the Bison, and also the positions of the remaining herds. The map will be placed in the American Museum of Natural History, at the suggestion of the Director.

The foregoing report, it is hoped, will give our members an idea of what the Society is trying to do, and how it is trying to do it. The officers are making an earnest and determined effort to carry out the purposes for which we organized, and they are more than ever confident of ultimate success. The Society itself is growing, and is in a much stronger position than it was even six months ago. Its membership has more than doubled in that time, and, thanks largely to our friends, the newspapers and magazines, it is much better known. Much of the preliminary work has already been done, and we have reached the point where actual results are being accomplished. With the persistent hard work which the officers are willing to do, there is no longer any doubt of our ability to accomplish our final purposes,—viz., "the permanent preservation and increase of the American Bison"; but it is most important that we stand together and keep this end in view. There is enough money in the treasury to carry on the work of the Society for a short time, but much more is needed for many purposes. It is hoped that ere long some of our wealthy countrymen will recognize the importance of the work the American Bison Society is trying to accomplish, and by generous contributions hasten the day when our national animal will be out of danger of extinction. In the meantime every effort should be made to increase the membership of the Society; the stronger we become, the better able we shall be to accomplish our purpose. We shall, therefore, ask each member to secure from among his friends, if possible within a month after receiving this report, at least one new member. If each

one will carry out his own small part of this plan, the Society can at once double its activity, for the doubling of our membership means the doubling of our income. Circulars and membership blanks may be obtained by applying to the Secretary.

TREASURER'S REPORT, AMERICAN BISON SOCIETY.

JANUARY 10TH TO DECEMBER 31ST, 1907.

Balance, January 10th, 1907		$1,332.23
RECEIPTS.		
Dues, Subscriptions and Donations	$2,890.10	
Interest	34.22	
		2,924.32
Total		$4,256.55
DISBURSEMENTS.		
Postage	$709.55	
Exchange on Checks	4.21	
Petty Cash (E. H. Baynes, Sec'y)	341.47	
Salary E. H. Baynes, Secretary	273.74	
Printing and Stationery	856.75	
Travelling Expense	56.91	
Miscellaneous:		
Eugene M. Fisher, drawing bison	20.00	
Caleb P. Buckman, burlap, labor	18.75	
Social Register Association, all issues, one year	25.00	
Charles Logue, stock	5.00	
New England Forest, Fish and Game Association	3.50	
Solatia M. Taylor, 5 frames	7.75	
Prof. Morton J. Elrod, account expenses and services	150.00	
New England Show Case Company, rent of case	6.00	
E. H. Baynes, checks remitted in error	25.00	
		2,503.63
Balance		$1,752.92

CLARK WILLIAMS, *Treasurer.*

PROPOSED NATIONAL BISON RANGE, FLATHEAD RESERVATION, N.W. MONTANA

THE FLATHEAD BUFFALO RANGE.

A REPORT TO THE AMERICAN BISON SOCIETY OF AN INSPECTION OF THE FLATHEAD INDIAN RESERVATION, MONTANA, FOR THE PURPOSE OF SELECTING A SUITABLE LOCATION FOR A NATIONAL BUFFALO RANGE.

By Morton J. Elrod, Ph.D.,
Professor of Biology, University of Montana, Missoula.
Director of the University Biological Station.

Acting on instructions from the President of The American Bison Society, I examined several places in the Flathead Indian Reservation, Montana, for the purpose of selecting a suitable location for a range in which to confine and perpetually maintain and propagate a herd of American Bison, or, as it is popularly known here, the Buffalo.

Having travelled over the reservation every summer for the past ten years I had some definite ideas of the portions of the reserve that would be most suitable for such a range. To my mind there were four available localities, but just which one was ideal could be determined only by close observation, covering all the points involved in preparing the range so as to make it suitable for permanent use.

The chief items of importance in making the selection were outlined as follows, although not necessarily in order as here given:

1. Accessibility.—To be of the greatest use, the range should be reasonably near to the railroad. The reasons for this are quite obvious. To ship animals in and out will be necessary from time to time. There may be need for transportation of forage. Fencing material must be procured, and long hauls by wagon are expensive. Lastly, the public will want to visit the animals and see them on the range, and will desire to reach them easily from the railway.

PLATE II.

A BIRD'S-EYE VIEW OF THE PROPOSED BISON RANGE.

From the summit of the Mission Mountains, as it appears in June. Taken just after a storm. The black line shows three sides of the boundary of the proposed Range. The view is south of west, from an elevation of nearly 8,000 feet.

2. THE RANGE.—This must be suitable to afford ample grazing grounds for the herd, both summer and winter, with plenty of water. There must be ample natural protection from winter storms and blizzards. Naturally, the public will not desire to see choice farm or fruit lands set apart as a buffalo range; hence non-irrigable land must be selected.

3. FENCING.—The range must be fenced; for otherwise the animals will become scattered, and poachers will molest them. To fence such a range as is desirable and necessary, is no small item; hence the desirability of a location whereon digging will not be too difficult, and where posts may be secured and delivered with a minimum of expense.

4. CARE-TAKING.—The range must be looked after, and the animals must be cared for. The care-taker will need certain material and provisions, and should have communication with the world at large.

FOUR LOCALITIES CONSIDERED.

The four localities examined with a view to selection are as follows, and may easily be located on the accompanying maps.

1. WILD HORSE ISLAND.—This island is in the western arm of Flathead Lake. It is 50 miles from the Northern Pacific Railroad, and nearly as far from the Great Northern. The island is completely isolated, but the contiguity of Cromwell Island, on the west, would make it possible for animals to swim from Wild Horse to Cromwell; and the latter is really a part of the mainland.

The island contains 2,164 acres, and rises to a height of about 1,200 feet above the lake. On the north it is rather densely wooded with yellow pine and red fir, with a sprinkling of cottonwood. On the southern side, the island is almost bare of timber, except the fringe around the lake. A portion of the lake shore is well adapted to fruit raising. There is no water, except that in the lake itself.

PLATE III.

GENERAL VIEW OF THE RANGE, FROM THE EAST.

Proposed Buffalo Range from the direction of Mission Mountains. The highest point is Quilseeh, 4,800 feet. To the left is Wheewheetlchaye,—Red Man's Ridge.

The island is too far from transportation lines, and too difficult of access by the public. Were this otherwise, it might possibly be made a suitable location.

2. THE LITTLE BITTER-ROOT COUNTRY.—This is a beautiful country, admirably suited for a range, but is too remote, too difficult of access, and would require greater expenditure for fencing than would be permissible. The roads to and from that section are hilly, not much travelled, and visitors to a herd located there would for a long time be very few. The Little Bitter-Root River, which is but a creek, flows through the valley which was formerly made by the outlet of Flathead Lake when the outlet was through the western arm of the lake. Through this valley access is easy, but it is from 60 to 90 miles distant from Kalispell, on the Great Northern Railroad. From the Northern Pacific, at Plains, the distance is less than half of that given, but the road is difficult to travel over in its present state.

3. THE HILLS EAST OF THE PEND D'OREILLE RIVER.* —It is here that the Pablo-Allard Buffaloes have ranged a great deal of the time. True, they have crossed the river often, and ranged westward toward the Little Bitter-Roots, but on several different occasions I have visited them in the very region now under consideration.

The general contour of the country is as follows: East of the river there is a valley several miles wide, and quite level; eastward of this valley is a range of low hills and buttes, extending north and south; east of these is a high and level bench, gradually dropping lower to form the Mission valley; on the eastern side of that valley the majestic Mission Mountains rise abruptly from the plain, the peaks having an elevation of from 7,000 to 10,000 feet above the sea, and 4,000 to 7,000 feet above the valley.

This location is fine, the conditions are favorable, with the possible exception of water supply; but the region is rather remote, and difficult of access. The new railroad from Kalispell to Dixon, connecting the Great Northern with the Northern Pacific, will go close to this range, and

*Inasmuch as on most maps this river is called the Flathead, we have found it desirable to adopt the name in most general use.—ED.

PLATE IV.

THE MISSION MOUNTAINS.
Looking east, from near the eastern boundary of the proposed Buffalo Range.

THE FLATHEAD INDIAN RESERVATION AND ADJACENT TERRITORY.

possibly will cut it; but the locality to be next mentioned has many more points in its favor.

THE RANGE RECOMMENDED.

4. THE RAVALLI HILLS AND MEADOWS.—This is the range I have selected and recommend as offering all the advantages. The section is in the form of a rectangle, with the Jocko River as the southern boundary, Mission Creek on the north and on the west is the "Big River," the Pend d'Oreille, also called Flathead. The eastern boundary is the ravine through which runs the main road from Ravalli to the Flathead Lake. This draw rises to a high summit which forms the crest of the divide between the Jocko River and Mission Valley, the elevation being 3,104 feet. On the opposite, or northern side a ravine drops down to Mission Creek. This is approximately the boundary.

The range proposed contains five Indian allotments, with a total of 800 acres, as shown in the map herewith. The selection in Section II, Town. 18, Range 21, includes the springs which form the little stream called Chimtaupeh; the selection in Section I, Town. 18, Range 21, includes a small stream with a few inches, flowing northwest, but disappearing before Mission Creek is reached; the selections in Section 7, Town. 18, Range 20, include a perennial spring with a small flow, but whose water soon sinks into the ground. All these springs are perpetual. There are fine springs in Sections 13 and 14, Town. 18, Range 21, which are also perpetual, and which furnish water for a stream sufficiently large to water many animals.

These five Indian selections should be eliminated either by purchase or by lien selections. In case both these courses prove to be impossible, they may be fenced out of the range. If they are eliminated the range will then have approximately 27 sections, as follows:

Beginning with the southeastern corner of Section 30, Town. 18, Range 20, run thence diagonally to the centre of 29; north on 29 to the boundary of 20; east to line between 20 and 21; north three miles to corner of Sections

4, 5, 8 and 9; diagonally across 5 to township line at northeast corner of 5; north across Mission Creek, along this creek at suitable distance through Section 31, Town. 19, Range 20; in Town. 19, Range 21, through sections 36, 35, 27, 28; south through 30 to township line; in Town. 18, Range 21 south through the center of sections 4, 9, 16, and to center of section 21; east a half; south a quarter; east a half, and south across the Jocko River, to the Northern Pacific right of way; following the right of way and river through Sections 27 and 26; crossing back north of the river; through 25 and 30 to point of beginning. On the map submitted herewith this line is clearly indicated as the boundary of the range proposed.

In case it is impossible to eliminate the five allotments, the line may run as before to the corner of Sections 8, 9, 16 and 17 in Town. 19, Range 20; thence west one and one-half miles; north to center of 7; west two miles to the center of 11 in Town. 18, Range 21; thence north a mile to center of 2, and west to line as before marked; or north across Mission Creek to line of boundary as outlined. The line of this alternative boundary is also shown.

This alternative proposition will give a little more than 17 sections if taken with the boundary first given, or almost 5 sections more as given last.

In finally fixing the area and boundaries of a bison range in the region proposed, there are three possibilities:

(1) If the five Indian allotments are removed, a range of 27 sections; (2) cutting out the allotments, a range of 17 sections; and (3), a range of 22 sections, but with more fencing than should be the case.

In proposition No. 1 the range would include over four miles of Mission Creek, one and one-half miles of the Jocko River, and four springs or clusters of springs in gulches. In No. 2 there would be the Jocko River, one cluster of springs, and the stream from another. In No. 3 there would be over three miles of Mission Creek, besides the one and one-half miles of Jocko River.

For No. 1 there would be required 20½ miles of fence, in No. 2 about 18 miles, and in No. 3 about the same as in No. 1. In fencing No. 1 there will be no hills to cross

PLATE V.

THE SOUTHERN PORTION OF THE RANGE.

The Jocko River flows from right to left, through the timbered flat. The Northern Pacific Railroad is seen in the valley. This picture shows Inskaltesshin. Seelaw is a little west of north.

in the work; in No. 2 there is a high hill to cross; in No. 3 it will be necessary to cross two hills.

By all means No. 1 is first choice. This would give ample grazing ranges for a large herd, with an abundance of water, and plenty of shelter from the storms of winter. The range should accommodate from 1,500 to 2,000 Buffaloes, including, as it will, about 18,000 acres. It will make an excellent range for antelope, deer and elk; and even mountain sheep should do well upon it.

GENERAL DESCRIPTION.

I will now give a description of the range, assuming that the entire range indicated as No. 1 is finally chosen by the Bison Society. If either of the other ranges are taken, a portion of this description in inapplicable.

It is said on good authority that this is the range which Mr. Pablo wanted on which to keep his herd of Buffalo. Colonel Rankin, the government allotting agent of the reservation, is emphatic in his opinion that it is *the* place of all places on the reservation for the proposed national buffalo herd. Joseph Allard, the son of Charles Allard, originally part owner of the Allard-Pablo herd, believes that this range is ideal. Duncan McDonald, one of the most intelligent men on the reservation, and who rode over the range with me during my study of it, says that no better place could be selected. Every one who knows the country, and whose opinion has been asked, says the same thing.

Tourists or visitors may step off the train at Ravalli, and in five minutes be in the range. *They may look into the range for nine miles as they ride from Ravalli to Jocko!* Animals may be shipped in and out with very little effort.

The range is strictly non-agricultural, but the greater portion of it affords excellent grazing. By non-agricultural is meant that it cannot be irrigated, owing to the fact that it is high above water, and irregular. For dry-farming, the hills are too steep. The highest point is on the quarter section between sections 13 and 24, elevation by aneroid 4,800 feet. The quarter section stone is on the narrow summit. This is about 2,000 feet above the railroad, and a little over two miles from Ravalli. From this

PLATE VI.

SOUTHERN FRONT OF THE PROPOSED RANGE.

This is a portion of the Range farther toward the east than that in Plate V. The Northern Pacific Railway runs through the middle of the picture, and the Jocko River runs through the timber, between the railroad and the hills.

high hill, or low mountain, the range slopes in every direction. On the south it drops to the Jocko River, on the west to the Flathead, or Pend d'Oreille River, on the north to Mission Creek, and on the east to the Mission Valley. The highest mountain is called Quilseeh, which in the Flathead language means "red sleep."

From Quilseeh Mountain, several ridges extend. These are excellently shown in Plate III, which was taken from the morainal hills to the eastward, or toward the Mission Mountains. The view is south-westward. In the middle of the picture is a depression, with a slope from left to right. In this depression lies the eastern boundary of the range, extending from left to right (south to north), about the middle of the picture. The highest point is Quilseeh, and the one to the left is Wheewheetlchaye.* Long Ridge slopes down to the right. The photograph shows the character of the range on the north and east. The range is hilly, but not precipitous, and is just such ground as the Pablo herd travels over daily. In the draws and ravines the grazing is fine. The selections of Alexander and Eneas are between the ridge on the sky line and the one immediately below it on the extreme right. The timber is scarce and the largest trees perhaps 150 to 200 years old. They are the yellow pine (*Pinus ponderosa*) and Douglas fir (*Pseudotsuga taxifolia*), with spreading limbs and branches. The water courses shown are dry in summer.

By turning the back to the picture shown in Plate III and travelling a few miles eastward the picture shown in Plate IV was taken. This is only a portion of the beautiful Mission Mountains, which stand out so grandly, and are especially imposing from the summit of Quilseeh or Wheewheetlchaye.

Quilseeh drops off to the south over a ridge called Inskaltesshin, referring to a mass of rocks, shale, etc., on the southern face, which to the Indian mind resembles a dragon stretched out on the face of the mountain. This is shown in Plate V. This is the steepest part of the range, and contains the timber. Plate VI shows the portion

*For convenience, this difficult Indian name will be changed to Red Man's Ridge.—Ed.

SOUTHERN FRONT OF THE PROPOSED BISON RANGE.

Taken from the same position as Plate VI, with a wide-angle lens. The southeastern corner of the Range is shown. The flat is the Jocko Valley. The river may be seen between the railroad and the hills.

farther east, up the river. Plate VII is from the same point as Plate VI, but with a wide-angle lens. It shows the Jocko Valley. Ravalli is almost on the edge of the picture, on the right, in the centre, where a depression separates the hills on the right from those on the left. This depression is the eastern boundary of the range. The Mission Mountains are visible in the hazy distance.

Standing on the same spot from which the pictures in Plates V, VI and VII were taken, and looking down the river, northwestward, the southwestern corner of the range may be seen. This view shows the Jocko Valley to its junction with the Flathead River, which comes in from the right (north), in the distance. The Flathead or Pend d'Oreille Valley and river extend in the distance to the left. The line of the bison range is along the slope above the Jocko River, and the fence should cross the river into the valley, within the limits of the picture.

The only good view of the northern side of the range is shown in Plate II. Indeed, this picture, taken from an elevation of nearly 8,000 feet in the Mission Mountains, gives a bird's-eye view of the entire range except on the south. It is thus seen to be an open range of low hills, almost bare of timber on the visible slopes. The range is distant from the point of view about ten or twelve miles.

CHARACTER OF THE SOIL.

Along Mission Creek and on the long slope bordering the Flathead River, there is considerable alkali. In such places the ground is quite bare of vegetation. On the steeper slopes the grazing is scanty. In the ravines, on the protected slopes, and in the wide heads of gulches, the vegetation is luxuriant. Last June the grass was waist high in the moist ravines, and knee high on the slopes. On the south, in the timber, there is considerable slide-rock, but this is a minor item. The broader slopes and wider ravines have rich, pebbly loam. The summits and ridges are outcrops of rock, with scanty vegetation.

THE VEGETATION.

In the spring the range is almost a fairyland of flowers. These continue until late in July. The broad-leaved *Bal-*

PLATE VIII.

ON THE SUMMIT OF THE RANGE.

Quilseeh, from Wheewheetlchaye. Head of Inskaltesshin Creek, showing protection. The view is north of west.

samorrhiza, with its yellow flowers, grows over most of the range. Wherever this plant grows the soil is rich. Bunch-grass grows in abundance. In the valleys, blue grass (*Poa*) and other nutritious grasses grow rankly. On the summit of Quilseeh, in June, within a few paces of each other, 21 species of plants were found growing. In the valleys and gulches, lupines almost shoulder high were visible everywhere. Wild geranium and *Phacelia* indicated, by their growth, plenty of moisture. Many species of water plants grew around the springs, and along the creek beds. In places the vegetation is rank, in other places moderate; in still others it is poor or absent.

TIMBER.

As has been previously stated, only a small portion of the range is covered with timber. This is confined to the southern slopes, and to the draws. The coniferous trees are yellow pine (*Pinus ponderosa*) and Douglas fir (*Pseudotsuga taxifolia*). There is no thick timber. The trees are scattered, well branched and afford good shade. Reforestation, or, more correctly speaking, the beginning of foresting, is taking place in several localities.

In several of the gulches there are dense clusters of willows and alders. On the hillsides are a few scattered rock maples. A scanty growth of timber is found along Mission Creek, although a narrow belt has a few large trees. Along the Jocko the growth is dense, with both pine and fir, and a thick stand of cottonwood, alder, birch and willow. As most of the timber grows on the hillsides, it is on that account difficult of access. Save a few scattering trees it is not commercially valuable. The fir trees will supply a large number of posts for fencing.

SPRINGS AND STREAMS.

The Jocko River is the largest stream touching the range. It rises in the Mission Mountains, to the southeast, always has a strong flow of pure, clear water, and will always afford a supply for the herd. When the reservation is thrown open to settlement much of the present flow will no doubt be consumed in irrigation, but the

PLATE IX.

VIEW OF THE JOCKO VALLEY.

Looking southeast, toward Ravalli, from the summit of the proposed Bison Range. Ravalli is marked with a cross. This is the railway shipping point.

river will always have water. The flow of the river June 30, 1900, was 660 second feet.

Mission Creek, on the northern boundary, rises in the Mission Mountains a few miles to the eastward. Perpetual snows form its source. It rises in the great amphitheatre shown in part in Plate IV, flowing down the canyon in the middle of the picture. Its flow on June 30, 1900, was 412 second feet. Its waters are clear and cold, and as pure as a mountain stream can be. Later on, much of its water will no doubt be used for irrigation, but the stream will not go dry. Its waters may be held back in spring, by reservoirs at its source. In one branch of the creek, near the snow-banks, is a lake a mile and a half long, nearly a half mile wide, and 250 feet deep. Its outlet is dammed by a glacial moraine, so that it is easy to increase the volume of water in the lake.

But, even if these two streams should be entirely used up in irrigation—which is out of reason—there are springs on the range which will supply an abundance of clear, pure and cold water. On the northern slope the seepage from the mountain is considerable. It breaks out in springs, which by digging could be easily made into large springs or wells. Chimtaupeh Creek and Inskaltesshin Creeks both head in a number of springs, which are said by residents never to fail. The waters from these springs disappear before reaching the valley, but flow in a regular stream for a mile or more after coming out of the ground. In all but late summer there are numerous water courses which head in small springs, but which later on dry up.

PROTECTION.—The prevailing winds of summer blow from the south or southwest. A breeze is quite surely to be felt on the summits of the range during the hot days of summer. The springs, the trees, the creeks, will give chance for cooling the animals in summer. There is more need for winter protection. No matter which way the storms may come, there will always be protection from the sting of the wind and snow. If it comes from the north, a Bison herd would have but to move over to the gulches on the south side; if from the east, the head of Chimtaupeh is a safe retreat; and no matter how fierce the winds, the animals may escape. The thickets along

PLATE X.

THE JOCKO RIVER VALLEY AND ITS JUNCTION WITH THAT OF THE FLATHEAD.
Seelaw Mountain is on the right. The proposed range fence would cross the river within the limits of the picture.

the water courses will of themselves alone be safe protection, and the slopes of the hills will enable wild animals to find places free from storm blasts, no matter how fierce they may be.

The range will always have bare surfaces, except in cases of sleet, which may glaze the surface with ice, or with frozen rain or new snow. Rarely is the range so coated that grass is not to be had by range stock. In this one gulch and its tributaries, wild animals may escape cold winds from any quarter. Perennial springs are found in the ravine shown in Plate VIII. There are thickets, to the left, out of sight; timber over the ridge to the left, and ridges for grazing all around.

Plate IX also shows the same thing. This is a view from Wheewheetlchaye, looking toward Ravalli, and showing the Jocko River and valley. The water course is usually dry. Animals on this side would find protection from winds from any point of the compass. This view shows the Jocko Valley for many miles up, toward the southeast. By looking at Plate X after viewing Plate IX a good idea of the Jocko Valley may be had. The road in Plate IX marks the limits of the proposed range.

The Jocko River at Ravalli, as seen in Plate IX, is better shown in Plate XI, taken at the railroad bridge at Ravalli.

FENCING.—The fencing of the range will require posts for the greater portion of the distance. Along the southern side trees may be used for a portion of the distance. Cedar posts are to be had by rail from Idaho, at Sand Point, or they may no doubt be secured from the Mission Mountains. Arbor-vitæ forests are found at the head of all the Mission Mountain canyons. Fir posts may be secured without difficulty, close to the range. There is a good road entirely around the range except on the south, and teams can drive from the roads on the west and east over most of the distance. Where the lines cross the hillsides, as will be the case sometimes, posts and fence will have to be dragged up. For the greater portion of the boundary, fencing material may be unloaded from the wagon where it is to be used. No doubt the Indians and white men in the vicinity will contract to furnish posts and

PLATE XI.

THE JOCKO RIVER, AT RAVALLI,
where it enters the proposed range.

put up fence at a very reasonable rate. Wherever possible the work should be given to the local people, as their co-operation and support will be a valuable factor in preparing the range.

CARETAKING.—In a range the size of the one here contemplated, and with animals as large in numbers as this herd will be in a short time, a home for a caretaker will be necessary. On the range as outlined there are two small Indian cabins, both inside of the range, and both several miles from the railroad. It will be necessary either to purchase a ranch with buildings, or make a new home. This matter may be taken up after the range is established, but plans should be made beforehand. There are several places where a home can be made, but, of course, there will be expenses connected with it.

Duncan McDonald's ranch is shown in Plates XII and XIII. Plate XII is a view from Ravalli, looking down the Jocko River. On the right is seen the southern limits of the range; in the valley is McDonald's hay ranch and orchard. The white house belongs to the ranch, as do also the cabins. The ranch joins the range on the north.

A range the size of the one proposed will need attention. There will be fences to look after, which will mean regular inspection. Springs will need to be walled up and looked after. The animals themselves will need looking after. Owing to the fact that the range is high above the streams and dependent upon rainfall for growth of vegetation, and that the native grasses on the hills do not grow a thick mat as do cultivated grasses, a larger acreage is needed than in humid climates.

A range may now be secured of sufficient size to maintain animals in such numbers as will be desired in coming years. If cared for properly, a herd of several hundred Buffalo may soon be bred. The land will never be fit for anything but grazing. If at first there are not enough Bison to make use of all the range, cattle or horses may be ranged at a rental, which will assist in keeping the range in condition. A good caretaker can look after all of this work. If the land is not put into a buffalo range, it will be used only for horse or cattle pastures.

PLATE XII.

RAVALLI AND THE JOCKO VALLEY LOOKING DOWN THE RIVER.
The hills on the right are on the southern limits of the range.
Plate XIII is a view from place marked X.

ENEMIES TO BUFFALO OR OTHER WILD ANIMALS.—Coyotes are not infrequent. Last May, while the Buffalo were being shipped from the reservation to Canada, I perched on some rocks at what is the corner of the range, with camera placed ready to photograph the herd as it was driven down the hill along the road. Not knowing when the herd would come, I waited several hours on this rocky eminence. While waiting, all unknown to me, a coyote came up to within a few feet, peering over the brow of the ridge at me, and leisurely trotted off. I was unaware of his presence until advised by those who were watching his performances. Almost any evening they may be heard in the hills about Ravalli. While coyotes are not uncommon, I have heard little or no complaint about wolves in this locality. The puma is to be found throughout the wooded portion of Montana, but it is not giving trouble in this section. There are occasional rattlesnakes reported, but during the several days that I walked and rode over the range I did not see any. It is safe to say the enemies would be no more numerous here than in other localities, and I believe they would be fewer than in the eastern ranges. They will no doubt become still scarcer as the country settles up. The Pablo herd, in their range on this reservation, has increased rapidly.

SENTIMENT OF THE PEOPLE.—Duncan McDonald rode with me over the proposed range, and talked freely. I told him exactly what was proposed. He was bitterly disappointed that the Government of the United States had permitted the Pablo Buffalo herd to go to Canada.

"What is the use of hunting for a buffalo range if the Buffalo are all gone?" was his laconic query, as he turned fiercely toward me while bemoaning the loss of the herd.

"Duncan, the Buffalo of America are not all dead yet, nor are the men who are trying to save them," I replied.

Then I told him of the animals yet living, of which he had read something, and of the plans of the American Bison Society, the men back of the effort to save the noble animal, and the great value to the community if such a herd were located in its midst.

PLATE XIII.

THE JOCKO VALLEY AT RAVALLI.

Orchard, house and part of the ranch of Duncan McDonald at Ravalli. Plate XII is a view from place marked with a cross.

"If we can get the range, the animals will be put on it," I stated.

"Do you think so?"

"I am sure of it."

"Professor Elrod, I hope they will do it. We all hope so. The Indians are very sorry to see the Buffalo go. They all love them. They all think the Government should keep them. They don't want to kill them. They love to see them roam over the hills and plains. Every Indian will be glad if the Government can and will save them, and keep them where they can be seen. And if there is anything in this world I can do to help, I want to do it."

All the intelligent men whom I have talked with on the reservation express the same opinion. Enterprising people in Missoula with whom the matter has been discussed are hopeful of the outcome, and greatly desire that the undertaking will be worked out successfully. The press has in a number of cases spoken highly of the proposed plan. Few have knowledge of the proposed range, and when its boundaries and the character of the land are understood the plan will meet with universal favor. I have previously mentioned the efforts of Joe Allard to interest Congress in the herd. Col. Rankin, allotting agent, is full of enthusiasm over the plan. There will not be a dissenting man, unless perhaps it may be some one who wants a portion of the range for himself.

CLIMATE.—The climate on the western slope of the Rockies is agreeably surprising to all those who stay in the country for any length of time. The absence of the great humidity of the Eastern and Central States relieves one of the disagreeable oppressiveness in summer, and the severity of cold in winter. The extremes are not great. The thermometer does not often fall below zero, and then for a short time only. The coldest weather recorded by the Weather Bureau in a record of over twenty years was 27 degrees below zero, during the winter of 1904-05. The mercury does not frequently fall below 15 degrees Fahrenheit. There have been winters when the thermometer did not fall below zero. The mean tem-

PLATE XIV.

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EASTERN SIDE OF THE PROPOSED RANGE.

This ravine is the eastern limit of the range, which is on the left. A portion of the Allard-Pablo herd is being driven down the hill along the road, for shipment to Canada.

perature, summer and winter, as recorded by the Weather Bureau for 20 years, is 46 degrees Fahrenheit.

In summer the days get warm, even hot. Rarely does the temperature reach 100 in the shade. In the shade one almost always feels cool. It is always cool at night. The perpetual snow in the mountains tempers the air, as does the water on the sea coast. In the evening the cool air from the snowy peaks rolls down the mountain sides and out across the valleys.

The climate of a region is dependent upon two important factors, warmth and moisture. On the Flathead Reservation the fall rains come in late September or October. During the winter the snow piles in the ravines in the high mountains for summer use. The spring months are delightful. Warm weather comes as early as March, when spring flowers appear. At Missoula, buttercups are usually gathered in February. Butterflies have been taken as early as the middle of February. April and May are delightful months, the latter usually of sunshine. June brings refreshing rains, lasting until after the celebration of our country's independence. July is likely to be without much rainfall, and the first of September is likely to bring showers. In July, August and September there are weeks of sunshine and glorious weather. The rainfall of the year averages 16 inches, varying from 15 to 20 inches.

There are no cyclones. From the configuration of the surface of the land, these are impossible. There are few fierce wind storms, such as are experienced on the great plains.

Chinook winds occur in this section. These warm winds lick up the snow from the valleys and lower hills, and deposit the moisture on the higher summits. On account of these winds snow does not lie long in the valleys. There are usually several of these warm winds every winter. At the time of this writing a strong chinook is blowing at Missoula, and the few inches of snow disappears fast. Often snow many inches deep may be evaporated in a few hours.

MINES, CLAIMS, ETC.—There are no mining or other claims, other than the allotments before mentioned, on the range. There are no prospect holes. There need

be no litigation whatever after the settlement of the allotment claims. The roads are such as are on any open country, where it is easiest to travel. It will not be necessary to have roads through the range. They could hardly be run except around the border, on account of the hills and ridges.

THE PABLO HERD.—This herd was started in 1884, with 36 animals brought together. In 1907 it numbered almost 600. Few people will believe there was such a number, but they were on the reservation, without doubt. The annual increment for several years has been between 60 and 100. There have been many sales, perhaps some losses by wild animals, and still the herd has increased rapidly.

This herd was sold recently to representatives of the Canadian Government. The understanding was that the entire herd was to be taken except 15 or 20, which Pablo reserved. The price was $250.00 each, large and small, old and young, male and female, delivered at Strathcona, but the Canadians paid the freight. Pablo suffered the loss in loading and in transportation, paid the expenses of bringing them in from the range, of loading, and of stalls, rope and other material.

Two train loads, containing approximately 200 animals each, or about 400, were shipped, one in late spring, the other in late fall. Nearly $100,000 have thus been paid by the Canadians for American animals. The expense to Pablo has been great. They were hard to bring in from the range, and weeks were required to bring together a few bands.

Approximately 200 Buffalo are yet on the range, which it was impossible to bring to the shipping point. No doubt many of these are old ones, and least desirable in starting a herd, but with this number there is still a chance for saving a portion of this herd for America.

Pablo cannot be blamed for the sale. The reservation is soon to be thrown open, his range will be gone, and so large a herd cannot be maintained without a large and free range. The herd cost him money in the beginning, money for maintenance, and he must dispose of it to any buyer. It is said on excellent authority he would prefer to have

PLATE XV.

A PORTION OF THE PABLO HERD, ON THE RANGE, FLATHEAD RESERVATION.

them kept in America, but saw no opportunity to sell to the Government, and they could not be sold to private parties.

The Pablo herd should not have been permitted to leave the country. The range outlined in this report will hold a herd twice the size of the original Pablo herd of 600, and still have food for as many more animals of other species. The cost of the range will not be as great as the loss to the nation of the herd that has been sold. If the money that should have been put into the herd is now in part put into this range, and in part into animals, in a few years the increment will be such as to make a herd of which the nation may be proud.

OTHER ANIMALS THAT MAY BE PUT INTO THE RANGE.

ELK.—Several men in the Flathead Valley, 60 or 70 miles north of the present range, have elk parks in the valley country, where many of these noble animals are raised. One man has more than 50, some with very fine heads of horns. The present range is admirably adapted to elk. The timber on the hills and along the streams is suited to their habits, and the range outside of the timbered section will give them miles of running country. A start may be had from animals in the country.

ANTELOPE.—The range is admirably suited to the prong-horned antelope, which is fast disappearing, and needs greater protection. In a few places in Montana there are still herds to be found, but a range like the one proposed will give the natural conditions for a home.

DEER.—Western Montana has both white-tailed and black-tailed (mule) deer in numbers. The Indians have had free range in killing on the reservation, and here they are scarce. It is quite likely that licks could be established on the range before fencing, and animals thus enticed into the limits of the range before it is fenced.

A drive might bring in both species of deer. The Columbian black-tail would also thrive here, without doubt. By planning ahead, animals could in all probability be secured from the wild animals of the vicinity.

There is considerable undergrowth in the timber, and along the rock ridges there is quite a little growth of bushy plants, enough to supply food of this kind for a fair sized herd.

ROCKY MOUNTAIN SHEEP.—These animals formerly roamed over this entire section, and several bands are in the adjacent mountain ranges. They should do well on this range, as it has open summits, rock cliffs, timbered ridges and open slopes.

ROCKY MOUNTAIN GOAT.—While there are no summer snow banks in the range, there are cool springs and ravines. The goat should be able to hold its own, even if it does not thrive as well as the other animals mentioned.

BLUE GROUSE.—Several of these birds were flushed while walking through the timber. There is an abundance of food for summer, and excellent nesting cover.

RUFFED GROUSE.—No ruffed grouse were seen on my visits, but along the Jocko and Mission Creeks they are found, without doubt, and in the brush and thickets around the springs and along streams is their natural home.

WESTERN SHARP-TAILED GROUSE.—In the cultivated fields these birds are often found in large-sized flocks. They may be on the range.

BOB-WHITE.—This eastern game bird has been introduced around Missoula, in the Bitter-Root Valley, and in the Flathead Valley. They have done well, and have greatly multiplied. During the summer they may be heard any day around the upper end of Flathead Lake. In the range they would have plenty of food in summer, but would probably need attention in winter, unless some crop was grown for them.

NAMES.—The names of creeks, ridges and mountains are all of Indian origin.

Quilseeh (Red Sleep), mountain, was named for Mrs. Duncan McDonald.

Seelaw, mountain, named for one of the United States Indian Judges of the reservation; a leading man, who lived near Dixon and died in 1906.

PLATE XVI.

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A PORTION OF THE PABLO HERD, READY FOR SHIPMENT TO CANADA.

Wheewheetlchaye (many grizzly bear), ridge, with summit east of Quilseeh; named for an old Pend d'Oreille Indian chief.

Inskaltesshin (a dead dragon), ridge and gulch, leading south from Quilseeh.

Kaiimi, gulch and creek, named for an old Indian, now dead.

Chimtaupeh (bob-tail), gulch, named for an old Indian.

ACKNOWLEDGEMENTS.—Duncan McDonald, of Ravalli, was kind enough to ride with me over the range and give me much help in understanding its general features and character. He gave me the information about the springs and streams, and in regard to the feeding capacity of the range. Col. Rankin, Indian allotting agent for the Government, has rendered great assistance. I am indebted to him for the map of the range, and for other courtesies. Major W. H. Smead, of Missoula, permitted me to photograph and use his map of the Flathead Reservation, marked in sections, and with all lines and streams indicated. Many others have rendered assistance in minor ways.

THE PROPOSED NEW YORK STATE BISON HERD.

At the annual meeting held in January, 1907, Professor Franklin W. Hooper proposed a movement for the establishment of a herd of American Bison in the Adirondacks, to be owned and maintained by the State, on State lands. The proposal received the immediate approval of the Society, and the Executive Committee was directed to take such steps as might be necessary to carry the idea into effect.

Mr. Madison Grant prepared a bill to provide the necessary legislation and a fund of $20,000.00 with which to fence a large area, of ten or twelve square miles, erect such sheds and corrals as might be necessary, purchase about 15 pure-blood bison, and transport them to the proposed range. The bill provided that the whole undertaking should be under the management of State Commissioner of Forests, Fish and Game, Mr. John D. Whipple.

The bill was introduced in the Assembly by Assemblyman Frank C. Hooper, of Essex, and in the Senate by Senator George H. Cobb. The Assembly Committee on Ways and Means promptly granted a hearing on the bill, at which Professor Hooper, Dr. Hornaday and Mr. Harry V. Radford appeared in support of the measure. There was no opposition. On the contrary, Chairman Sherman Moreland, Speaker Wadsworth, and all the members of the committee were not only friendly to the measure, but they facilitated its progress.

The following are the names of the members of the Ways and Means Committee of the Assembly for 1907:—

Sherman Moreland	James T. Rogers
Jean L. Burnett	John K. Patton
Jesse S. Phillips	James K. Apgar
Edwin A. Merritt, Jr.	J. Mayhew Wainwright
George H. Whitney	Mervin C. Stanley
Gary H. Wood	James Oliver

Thomas J. Farrell

Senator Cobb's bill was referred to the Finance Committee of the Senate. At the hearing which was granted by that committee, Mr. Hornaday appeared in behalf of the measure, and there the whole matter was received in the most friendly spirit. Through the initiative of Senator Armstrong, chairman, the bill was recast in the briefest form possible, and it was inserted as an item in the annual supply bill. On that basis it was approved by both Houses, and the conference committees, and finally passed as part of the supply bill. In effect, the members of both branches of the Legislature were unanimously in favor of the immediate establishment of a State Bison herd, as proposed by The American Bison Society.

The membership of the Senate Committe on Finance in 1907 was as follows:—

William W. Armstrong	Jotham P. Allds
Henry Wayland Hill	William J. Tully
Owen Cassidy	Martin Saxe
John N. Cordts	William T. O'Neil
John Raines	Samuel J. Ramsperger
Dominick F. Mullaney	Charles H. Fuller

Thomas F. Grady

All friends of the American Bison, in general, and the members of the Bison Society in particular, are indebted to Speaker James W. Wadsworth, Jr., Senators Armstrong, Cobb, Hill and Raines, and Assemblyman Hooper, Moreland and Merritt. The generous spirit in which the matter was received by the New York Legislature as a whole, may fairly be regarded as an index of the interest which nearly all intelligent Americans feel in the perpetual preservation of America's most conspicuous wild quadruped.

Coincident with the final passage of the supply bill, the Bison Society received what it regarded as a trustworthy intimation that Governor Hughes was friendly to the proposal for a State Bison herd, and might be expected to approve the item. Nevertheless, both Assemblyman Hooper and the President of the Society wrote the Governor, separately, requesting a hearing. In making the application Mr. Hornaday took occasion to state pointedly

some of the reasons why the proposition should be carried out, and assured Governor Hughes that its practical success was beyond question.

The two requests for a hearing were not answered, and therefore it was supposed that the Governor was satisfied to act without further information. Favorable action was confidently expected, and the officers of the Society purposely refrained from troubling the Executive with correspondence.

To the members of the Bison Society, and many others, Governor Hughes' veto of the item for an Adirondack herd came as a profound and painful surprise, than which no action could have been more unexpected.

The Governors' reasons for the veto were recorded as follows:—

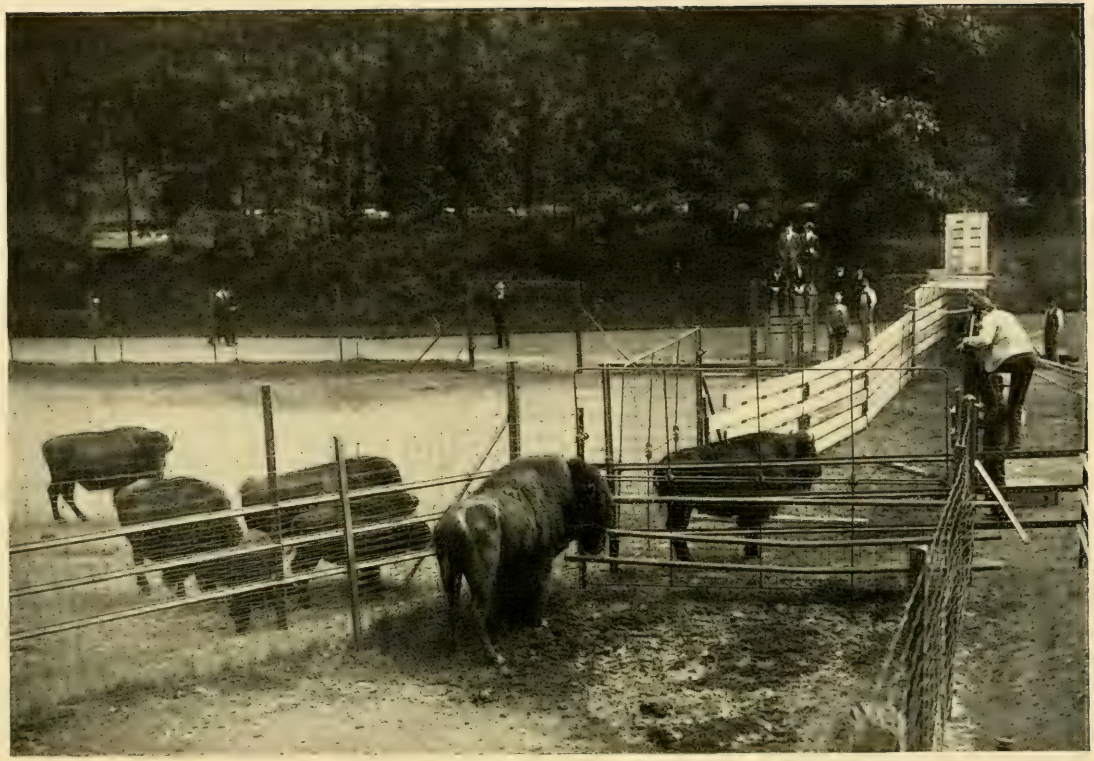
> "It is doubtful, to say the least, whether there ever have been any Bison in the Adirondacks, and the policy of attempting to maintain Bison there is questionable. In view of the many demands upon the Treasury of the State, and the many improvements which it has been found necessary to curtail, I should not feel justified in approving the item."

Although the officers of the Bison Society are astounded, they are not in the least dismayed. The 8,000,000 people of New York State desire to have a Bison herd of their own, on land which they own in the Adirondacks, and they are both able and willing to pay the very trifling sums that it will cost. They know without being told in measured words that such a herd would in a short time increase to such proportions that every small city in this State could presently be supplied with a breeding pair of Bison for its public park, to interest millions of people, young and old, and to testify to the interest that the Americans of to-day feel in the splendid species which the Americans of thirty years ago so nearly exterminated.

When such a measure has passed the New York State Legislature *unanimously,* it is a sure sign that the people desire the thing for which it provides. The report of Comptroller Glynn, published in December, announces that the surplus in the State treasury at the close of 1907, exclusive of all bills payable, was the very comfortable

sum of $13,678,138. In view of this fact, it would appear that the Legislature was within bounds when it authorized an expenditure of $20,000, with which to establish a herd of Bison in the Adirondacks.

W. T. H.



THE CHUTE AT THE BISON CORRALS IN THE ZOOLOGICAL PARK.

THE FOUNDING OF THE WICHITA NATIONAL BISON HERD.

By William T. Hornaday.

In 1901, the Kiowa-Comanche Indian Reservation, in southwestern Oklahoma, was by act of Congress opened up for settlement. When Congress enacted the law throwing open the Indian reserves of Oklahoma for settlement, it also created of the Wichita Mountains and the plains adjacent thereto, a national forest reserve containing 60,800 acres.

By a proclamation issued by President Roosevelt, on June 2d, 1905, the whole of this National Forest Reserve was designated by authority of an act of Congress (33 Stat. 614), as a national game preserve, withdrawing the whole area from agricultural settlement and dedicating it to the preservation of wild quadrupeds and birds of national importance.

In view of the fact that this new game reserve embraced some of the best grazing grounds of what once was the great southern herd of American Bison, it occurred to the Director of the New York Zoological Park that an opportunity had been created for the founding of a Government herd of American Bison, under exceptionally favorable conditions. It seemed evident that in view of the light snowfall in Oklahoma, and the fact that formerly millions of Bison inhabited the plains of Oklahoma and Texas, all the year round,—subsisting by natural grazing throughout the winter,—that it would be entirely possible for Bison to maintain themselves at the present day, all the year round, by grazing.

Prior to 1905, it appears that no private individual nor corporation of any kind, ever had offered to the United States Government a gift of American Bison, as the nucleus of a National herd. In view of the well-known fact that no large species of quadruped can be bred and perpetuated for centuries in the confinement of zoological

gardens and parks,—even where the enclosures are as large as those in the New York Zoological Park,—it seemed reasonably certain that the only way to insure the perpetuation of the Bison species for centuries to come lies in the creation of several national herds, maintained by the Government on large areas of grazing grounds. It seemed desirable that for the encouragement of the National Government in the perpetuation of the Bison species, the scientific institutions of the country, and private individuals also, should do more than offer advice and exhortations to Congress. Accordingly, a formal cummunication was laid before the Executive Committee of the New York Zoological Society, suggesting that the Society should offer to the National Government, through the Secretary of Agriculture, as a free gift, a herd of not less than twelve pure-blood American Bison, of various ages, to serve as the nucleus of a new national herd, provided Congress would appropriate a sufficient sum of money to erect a suitable fence around a large area of grazing grounds in the Wichita Forest Reserve, and maintain the gift. This suggestion met with the instant approval of the Zoological Society, and the Director of the Park and the Secretary of the Society, Mr. Madison Grant, were instructed to take all steps that were necessary to carry it into effect. The date of this action was March 15, 1905.

On March 25, 1905, a definite offer of a nucleus herd of Bison on the condition outlined above, was made to the Government, through the Secretary of Agriculture. It met with a prompt and cordial acceptance, and the Secretary immediately directed the Bureau of Forestry to co-operate with the Zoological Society in selecting a suitable range. The Society was invited to send an agent to Oklahoma, to join a representative of the Forestry Bureau in making a careful examination of all portions of the Wichita Game Reserve, and with a view to selecting and recommending a location for the proposed range.

On November 22d, 1905, Mr. J. Alden Loring was selected as the Society's agent for the proposed examination, and he proceeded immediately to Oklahoma, for the object stated above.

On February 1st, 1906, he submitted to the Zoological Society a report, which may fairly be regarded as a model of its kind. It sets forth with ample fullness of detail the physical character of the whole of the Wichita Forest Game Reserve—its elevations, soil, vegetation, timber, grazing-grounds, water supply and climatic conditions generally. It discusses intelligently all the difficulties that are liable to be encountered in establishing a herd of Bison in that region, and finally furnishes a map showing the area selected by Mr. Loring and Mr. E. F. Morrissey, then Supervisor of the Wichita Game Reserve.

In accordance with his instructions from the Society, the bison range proposed and shown by boundaries on the map, contained twelve square miles of territory, and is situated in the western center of the Wichita Reserve as a whole.

In the area proposed as the range for the new bison herd, there are abundant grazing grounds, consisting of gently rolling prairie, covered with choice mesquite grass, buffalo grass and blue-stem. The grazing grounds are practically surrounded by several high, round-topped or rock-capped hills, and cliffs and ridges of red granite rock. Heavy growths of black-jack oak usually cover the slopes, and near the bases of these elevations, black-jack and post oak timber sometimes extend down into the level country for a quarter of a mile. In several portions of the forest there are trees sixty feet in height. The mountains, hills and timber, taken together, afford abundant shelter for the Bison from the fiercest storms of winter.

The highest peak is about 600 feet in height.

The most important grazing ground was christened by Mr. Loring "Winter Valley," "because it makes such an excellent winter range. In this we found many Buffalo wallows, and mesquite grass in sufficient quantities to winter such a herd of Buffalo as it is proposed to place on the range."

The water supply of the bison range is abundant and constant. A fine spring, situated in the northern portion of the range, is the source of Cache Creek, which flows southward through practically the entire length of the

THE BISON ON THE WAGONS AT CACHE.

bison range, and furnishes a perpetual supply of pure water. There is no impure water anywhere in the range; nor is there any possibility that impure water could flow into the range.

Mr. Loring's report was published by the Zoological Society in its Tenth Annual Report (1905), and promptly laid before the First Session of the Fifty-ninth Congress, in which Mr. Madison Grant, Secretary of the Zoological Society, and Dr. T. S. Palmer, of the Biological Survey, rendered most important service. Through the kind co-operation of Hon. John F. Lacey, of Iowa, author of the famous Lacey Bird Law; Hon. James W. Wadsworth, of New York, Chairman of the House Committee on Agriculture; Hon. James Wilson, Secretary of Agriculture, and other members of Congress interested in the perpetual preservation of the Bison, an item was inserted in the annual Agricultural appropriation bill, providing for an appropriation of $15,000, with which to erect a substantial steel-wire fence, seven feet six inches in height, entirely around the proposed bison range, to erect suitable shelter-sheds, a barn for the storage of hay, flood-gates across all streams, and also to purchase such supplies of hay for use during the first year as might be necessary. Without the slightest opposition, either in the House of Representatives or in the Senate, this item was passed with the appropriation bill and became a law. Forthwith the Secretary of Agriculture requested Mr. Gifford Pinchot, Chief of the Forest Service, and thereby in sole charge of the Wichita Game Reserve, to take all steps that might be necessary to carry the law into effect and fully meet the conditions proposed by the New York Zoological Society.

At the request of the Forestry Bureau, the Director of the Zoological Park prepared plans and specifications for the improvements to be made and designed a series of corrals and sheds for the handling of the Bison herd when not on the range. All these plans were approved by the Forestry Bureau, and forthwith a contract for the work of erecting the fences, corrals, sheds and other buildings was advertised. The lowest bid for the work was made by Gurley & Paine, of Denton, Tex., and the Forestry Bureau immediately executed a contract with that firm. Work

EACH BISON WAS SPRAYED WITH CRUDE OIL.

A PORTION OF THE CORRALS, SHOWING THE SHELTER.

began in the late summer of 1906, and was prosecuted thereafter with commendable diligence. It is reported by two representatives of the Zoological Society who accompanied the Bison herd to Oklahoma, that all the improvements made are of the most substantial, workmanlike and generally satisfactory character. Notwithstanding the fact that the contractors have encountered very great practical difficulties in constructing the fence over rocky ground and up and down steep hills, often necessitating the carrying of all materials by hand for long distances, the work has gone forward in a most painstaking and conscientious manner. In that dry climate, the fences of the new range and corrals should last for a great many years without renewal. All the posts were of hard wood, carefully seasoned, and specially treated, to prevent decay.

After extensive inquiries for the best candidate for the position of caretaker of the new Bison herd, the Forestry Bureau finally selected Mr. Frank Rush, who was appointed in the early autumn of 1907, under the temporary title of Forest Guard. Mr. Rush entered upon his duties in the month of September, and established a residence on the Wichita Game Reserve.*

The time selected by the Zoological Society for the shipment of the herd under the conditions most favorable to its transplantation was in October, 1907. At the request of the Society, the Forestry Bureau instructed Mr. Rush to come to New York, in order that he might become thoroughly acquainted with the herd in its home and accompany the shipment to Oklahoma.

After long and careful consideration, the Director of the Zoological Park decided that the only way in which to prevent all accidents to the Buffaloes while in transit, was that each one should be crated at the Zoological Park and transported therein to the corrals of the new bison range. Accordingly, a series of crates were prepared, and for the benefit of Buffalo shippers generally, the dimensions are given.

*On January 1, 1908, Mr. Rush was appointed Forest Supervisor of the Wichita National Forest.

INTERIOR DIMENSIONS OF CRATES FOR AMERICAN BISON.

No. 1—For large adult bull: 9 feet long, 5 feet 6 inches high, 3 feet 6 inches wide.

No. 2—For bulls four years old and adult cows: 8 feet long, 5 feet high, 3 feet wide.

No. 3—For cows and bulls two years old: 7 feet long, 4 feet 6 inches high, 2 feet 6 inches wide.

No. 4—For calves in first year: 5 feet long, 4 feet high, 2 feet 3 inches wide.

*In order to get this crate into an Arms Palace Stock-car, it was necessary to cut off six inches of its length.

In these crates no feed boxes were built in. A door nine inches high, on strong hinges, was provided at each end, at the bottom, and both doors were arranged to bolt to the bottom very firmly when closed. The crates were smooth inside and built solidly for two feet up. The framing timbers under the bottom all were made to run lengthwise, and there were no crossboards underneath to interfere with rollers. This precaution is exceedingly necessary, because it is usually impossible to move Buffaloes in crates save on rollers. At one end, a strong door was made, to slide up and down. This door must always run easily, in order that it may be quickly dropped after an animal has been driven into a crate. Once the animal is inside, the door requires to be bolted with heavy wood-screws, put in with a monkey-wrench. To keep the rear run across from side to side, and secured by nuts and end of a crate from springing apart, two iron rods were washers.

For watering a Buffalo in a crate, the best arrangement is a wooden box, about 18 inches square, with sides six inches high, in order that it may be introduced at the feed-door and taken out again at the proper time. This is also to be used as a feed-box in feeding grain of any kind.

There are two ways in which Buffaloes may be made to enter shipping crates. The best course is by means of a long, narrow chute, with the crate placed at one end, its entrance door raised, and a man posted on top of the crate

A PORTION OF WINTER VALLEY, SHOWING THE LOCATION OF THE CORRALS,

behind the raised door, in order to drop it as soon as the animal enters. The bottom of the crate should be covered with hay, and hay should be strewn along the corral for a few feet of the distance leading into the crate. For loading a large number of Bison, it is much the best that the crates should rest upon a raised platform, similar to that in use at the Zoological Park. The other method is in some respects more difficult. It consists in throwing a lariat around the horns of the Bison, or around its neck, and dragging the animal in by main strength. This method often is useful as a last resort, and once an animal is roped, it is quickly drawn to its place.

When the bison corrals of the Zoological Park were rebuilt two years ago, a permanent chute was erected for the loading of Bison that might require to be sent away.

The following animals were selected to constitute the nucleus of the Wichita National Bison herd:—

1	large bull, 5½ years old,
1	bull, 3½ years old,
2	bulls, 2½ years old,
1	spike bull,
1	bull calf, 6 months old,
6	adult cows, all breeders,
1	cow, 2½ years old,
1	cow, 1½ years old,
1	female calf, 6 months old.
Total, 15	head.

The Bison thus selected represent four distinct strains of blood. The large breeding bull is not related to any of the other members of the herd. It is the belief of the writer, based on recent studies of the development of wild animals derived from a small number of progenitors, but ranging free on large areas of territory, that on any range for animals as large as that of the Wichita Bison Range, the dangers of evil results from inbreeding are too small to be considered seriously, provided the original stock is sound and healthy. Of course it is well known that diseased parents transmit their diseases to their offspring, and the greatest evils of inbreeding arise from this source.

On October 10th, between 11 A. M. and 5.30 P. M., thirteen Bison of the Wichita herd were successfully crated and delivered at the railroad. Trouble was experienced with only two of the fifteen animals. One young cow objected to entering the crate, as also did the largest bull. With a very brief delay, however, both were eventually driven into their crates, and the whole fifteen head were placed on board the cars at Fordham Station without the slightest accident.

Through the efforts of the late Charles T. Barney, Chairman of the Executive Committee, Mr. Dudley Evans, President, and Mr. H. B. Parsons, Vice-President of the Wells-Fargo Express Company, consented that their Company should transport the two Arms Palace Horse Cars containing the Bison from St. Louis to Cache, free of charge. Mr. James C. Fargo, President of the American Express Company, also offered, on behalf of his company and the New York Central Lines, to transport the cars free of charge from New York to St. Louis. These complimentary services were rendered because of the public interest attaching to the object in view, and were equivalent to a gift to the Zoological Society of $1,000.00, or thereabouts. In fact, but for this concession on the part of the two express companies, it would have been impossible to have shipped the buffaloes by passenger train service, in which event the shipment would have been far longer in transit, and the buffaloes would have been much reduced in strength by the long journey in close confinement.

The shipment left Fordham Station, New York City, on October 11th, in charge of Chief Clerk H. R. Mitchell, of the Zoological Park, and Mr. Frank Rush, who were also accompanied by Mr. Elwin R. Sanborn, of the Zoological Park staff. Thanks to the experience and knowledge of Mr. Mitchell in matters relating to railway transportation, the journey from New York to Cache was made in seven days—the distance being 1,858 miles. Naturally, the fact that two carloads of Buffaloes were being sent from a crowded eastern city back to the southern Buffalo range, attracted great attention; and in Oklahoma,

A BAND OF COMANCHE INDIANS WHO CAME FROM CACHE TO SEE THE BISON.

especially, the interest of the public reached the highest pitch.

All persons who never have had an opportunity to become familiar with the difficulties involved in shipping a herd of large, hoofed animals by rail, should be advised that such an undertaking involves very serious difficulties and demands first-class ability. In his narrative of the transportation of the herd from the Zoological Park to the Wichita Reserve, published in the Zoological Society's Bulletin No. 28, page 412, Mr. Elwin R. Sanborn records the following statement:—

"It would be churlish and a neglect unpardonable not to award to Mr. Mitchell praise for the admirable manner in which the details of the transportation were executed. In every instance, his knowledge of railroad methods and his tireless energy overcame obstacles which would have meant hardship and perhaps death to some of the Bison, and their safe arrival at Cache was due absolutely to his splendid work."

On reaching the town of Cache, it was found that Mr. W. R. Mattoon, Acting Supervisor, in charge of the whole Wichita Reserve, had perfected arrangements for transporting the animals from the railway to the range. A caravan of wagons was found awaiting the arrival of the shipment. Forthwith the crates were loaded upon the wagons and hauled twelve miles across the prairie to the new bison range. On arrival there, the crates were, without any great difficulty, unloaded in the corrals, and the Buffaloes were liberated. None of the animals had sustained the slightest injury, and all arrived at their new home in excellent condition.

In establishing the nucleus herd of Bison in its new home, there is but one danger which affords ground for anxiety. The Wichita Reserve is within the range of the cattle-tick which produces Texas fever, and inasmuch as cattle have previously been grazing over the whole area of the Wichita Game Reserve, it is necessary that special care shall be taken to eliminate the presence of that pest from the range. Mr. Rush and Mr. Mattoon have made a careful study of the situation, and have determined upon a plan which certainly promises to be successful. In the

first place, the whole area of the Bison corrals has been burned over. In addition to this, all the animals were sprayed with crude petroleum before they were taken from their crates. It is the intention of the managers of the herd to spray the animals annually, in case it should prove necessary. A close watch will be maintained for evidences of the presence of the Texas fever tick, and if any are found to have reached any of the Buffaloes, they will be immediately destroyed by the spraying operation.

It is also intended, as a further precaution, to burn over about 200 acres of the bison range adjoining the corrals, and surround it by a temporary fence, in order that the herd may be kept entirely under control and close observation during the period that it will be in danger of coming in contact with the fever tick.

The Zoological Society has every confidence in the judgment of Mr. Rush and Mr. Mattoon, and believe that the intelligent efforts which they are now putting forth for the maintenance of the herd will be crowned with complete success.

Since the arrival of the herd in its new home, two calves have been born, one male and one female, both of which are vigorous specimens and seem likely to survive.

We confidently look forward to the increase of the Wichita national herd at a rapid rate, and there is every reason to believe that within a very few years a herd of more than one hundred animals will be the result. It is expected and hoped that American elk, prong-horned antelope and mule deer will be liberated in the bison range, and that they will there thrive and multiply along with their natural neighbors, the Bison. There is now a small herd of wild white-tailed deer inhabiting the rough mountain tops and timber of the bison range, and now that they are fully protected, they should increase to satisfactory numbers.

This completes the history of the founding of the Wichita national Bison herd up to the present date.

We especially commend to the attention of the public the fact that the national Government quickly responded to the invitation of private individuals,—or to speak more

correctly, of a scientific corporation,—to join it in this effort for the perpetual preservation of the American Bison species.

It is highly desirable that all friends of the American Bison should show a practical interest in this work by taking an active part in it and helping to share the initial burden. It is reasonably safe to assume that Congress can be persuaded to establish other national herds of Bison in other portions of the United States, provided other individuals, or scientific bodies, will take the initiative in the same manner that was so successfully taken by the New York Zoological Society.

SUPPOSED REMAINS OF CHIEF POUND-MAKER'S LAST BIG BISON SLAUGHTER.

CENSUS OF LIVING AMERICAN BISON ON JANUARY 1st, 1908.

COMPILED BY WILLIAM T. HORNADAY.

OWNER AND LOCATION	MALES	FEMALES	YOUNG BORN 1907	TOTAL ON JAN. 1, 1908
UNITED STATES				
ARIZONA:				
Grand Canyon Game Preserve—C. J. Jones	12	2	1	14
ARKANSAS:				
Wiener—Albert Huber	1	1	0	2
CALIFORNIA:				
San Francisco—Golden Gate Park	11	7	2	18
COLORADO:				
Denver—City Park	6	10	2	16
DISTRICT OF COLUMBIA:				
Washington—National Zoological Park	3	5	0	8
ILLINOIS:				
Chicago—Lincoln Park	7	6	5	13
IOWA:				
Bancroft—C. J. Lenander	4	8	2	12
Buffalo Centre—C. E. Mallory	3	1	1	4
Davenport—City Park	1	7	1	8
Keokuk—Rand Park	2	2	0	4
KANSAS:				
Belvidere—Soldier Creek Park	12	15	8	27
MASSACHUSETTS:				
Newtonville—Norumbega Park	3	1	1	4
West Brookfield—Indian Rock Farm	1	1	0	2
MICHIGAN:				
Detroit—Belle Isle Park	1	3	0	4
Pontiac—Joshua Hill	2	3	1	5
MINNESOTA:				
Buckman—John Schmolke	1	2	0	3
Cardigan—James J. Hill	4	2	1	6
MISSOURI:				
St. Louis—Forest Park	3	0	0	3
MONTANA:				
Kalispel—Estate of C. E. Conrad	30	50	24	80
Ronan—Michel Pablo	106	134	49	240*
NEBRASKA:				
Friend—J. W. Gilbert	5	2	1	7
NEW HAMPSHIRE:				
Newport—Blue Mountain Forest Association (Corbin Herd)	65	71	20	136
NEW YORK:				
Buffalo—Zoological Garden	5	2	2	7
Cohocton—B. G. Veeder	1	0	0	1
New York City—Zoological Park (Also see OKLAHOMA Preserve).	14	19	10	33
Central Park Menagerie	1	4	1	5
Brooklyn—Prospect Park	0	1	0	1
OHIO:				
Cincinnati—Zoological Garden	10	11	6	21
South Newberry—W. B. Cleveland	3	4	....	7
Toledo—City Park	2	0	0	2

* As counted by an agent of the Canadian Government, under the direction of Mr. Howard Douglas. The sexes were not counted, and the division has been arrived at by the rules of proportion, based on the 398 head previously taken to Canada from this herd.

CENSUS OF LIVING AMERICAN BISON ON JAN. 1st, 1908—*Continued.*

OWNER AND LOCATION	MALES	FEMALES	YOUNG BORN 1907	TOTAL ON JAN. 1, 1908
OKLAHOMA:				
Wichita Game Reserve—U.S. Government	7	8	2	15
Bliss—101 Ranch—Miller Brothers	18	18	0	36
Pawnee—Major J. W. Lillie	10	9	....	19
PENNSYLVANIA:				
Philadelphia Zoological Garden	4	3	2	7
Pittsburg—Highland Park Zoo. Garden	1	1	0	2
SOUTH DAKOTA:				
Fort Pierre—James Philip	about 63	about 95	32	158
TEXAS:				
Goodnight—Charles Goodnight	35?	35?	21	70
UTAH:				
Salt Lake City—John E. Dooly	12	23	11	35
WISCONSIN:				
Milwaukee—City Park	1	1	0	2
WYOMING:				
Yellowstone National Park—Government Herds. Also see under "Wild Buffaloes."	27	34	5	61
Dot Island, Yellowstone Park	4	4	2	8
Wolf—Eaton Brothers	5	5	0	10
CANADA				
ALBERTA:				
Banff—Rocky Mountain Park of Canada	30	37	16	67
Elk Island Park	177*	221*	81	398
ATHABASCA:				
See under "Wild Buffaloes"				
MANITOBA:				
Winnipeg—Silver Heights Park	7	3	1	10
ONTARIO:				
Toronto—Riverdale Park	0	1	0	1
EUROPE				
BELGIUM:				
Antwerp—Zoological Gardens	2	2	0	4
ENGLAND:				
Haggerston Castle—C. J. Leyland	1	0	0	1
London—Zoological Gardens	1	1	0	2
Woburn Park—Duke of Bedford	15	19	9	34
GERMANY:				
Berlin—Zoological Gardens	3	2	2	5
Breslau—Zoological Gardens	2	1	+	3
Dusseldorf—Zoological Gardens	2	3	0	5
Frankfort, A.M.—Zoological Gardens	2	2	0	4
Hamburg—Zoological Gardens	2	3	0	5
Stellingen, near Hamb.—Carl Hagenbeck	4	8	0	12
Hanover—Zoological Gardens	1	1	0	2
Cologne—Zoological Gardens	2	2	1	4
Leipzig—Zoological Gardens	3	4	1	7
AUSTRIA:				
Slawentzitz, U. Selesia—Prince Hohenlohe	8	15	5	23
Bohemia—The Prince T.	0	2	0	2
NETHERLANDS:				
Amsterdam—Zoological Gardens	2	3	1	5
Rotterdam—Zoological Gardens	1	1	0	2
Hilversum—F. E. Blaauw's Graveland	2	4	1	6
RUSSIA:				
Askania-Nova—Friedrich Falz-Fein	1	3	2	4

AMERICAN BISON RUNNING WILD.

In Yellowstone Park, estimated by General S. B. M. Young..... 25
In Athabasca, Canada, estimated by E. T. Seton and Mounted Police.....300

* Adults purchased in 1907 from M. Pablo, Ronan, Montana.
† One calf born and sold during year 1907.

BUFFALO-DOMESTIC HYBRIDS, "CATTALOES."

OWNER AND LOCATION	TOTAL ON JANUARY 1, 1908	
UNITED STATES		
ARIZONA:		
Grand Canyon Game Preserve—C. J. Jones	57	11 males. 46 females. 9 calves in 1907.
IOWA:		
Bancroft—C. J. Lenander	2	1 ½ breed. 1 ¾ breed.
KANSAS:		
Belvidere, Kiowa County—Soldier Creek Park	1	½ breed calf.
MINNESOTA:		
Buckman—John Schmolke	5	
Cardigan—James J. Hill	12	3 males. 9 females.
MONTANA:		
Ronan—Charles Allard	about 40	2 ¾ blood calves, born 1907.
OKLAHOMA:		
Pawnee—Major J. W. Lillie	33	
Bliss—101 Ranch, Miller Brothers	1	
SOUTH DAKOTA:		
Fort Pierre—James Philip	8	
TEXAS:		
Goodnight—Charles Goodnight	about 100	Bred to ⅛ and $\frac{1}{16}$.
UTAH:		
Salt Lake City—John E. Dooly	1	Male, ½ Hereford, infertile.
CANADA		
ALBERTA:		
Banff—Rocky Mountain Park of Canada.	13	
ONTARIO:		
Bobcaygeon—Mossom Boyd Company	43	9 males and 26 females, as follows: 1 ¾ bison bull. 1 ⅝ bison bull. 3 ¼ bison bulls. 4 ⅛ bison bulls. 4 ¾ bison cows. 3 ½ bison cows. 10 ¼ bison cows. 9 ⅛ bison cows. 8 calves born in 1907, as follows: 3 ⅜ bison calves, the product of a ¼ bull bison and ½ bison cows. 5 ¼ bison calves, the product of a ¼ bison bull and ¼ bison cows.
QUEBEC:		
Quebec—Holt, Renfrew & Company	1	
EUROPE		
ENGLAND:		
Haggerston Castle—C. J. Leyland	19	
London—Zoological Gardens	1	Hybrid between American and European bisons.
RUSSIA:		
Askania Nova—Friedrich Falz-Fein. (South Russia.)	8	3 half-breed males. 1 ¾ bison male. 1 half-breed female. 2 three-quarter bison females. 1 one-quarter breed female.

SUMMARY.

AMERICAN BISON, OF PURE BLOOD

	MALES	FEMALES	CALVES IN 1907	TOTAL ON JAN. 1, 1908	TOTAL IN 1903
Captive in the United States...	506	610	203	1116	969
Captive in Canada.....	214	262	98	476	41
Total in America.....	720	872	301	1592	1010
Captive in Europe.....	54	76	22	130	109
Total in Captivity.....	774	948	323	1722	1119
Wild Bison in the United States, Estimated.....				25	
Wild Bison in Canada, Estimated				300	
Total pure blood Bison, Jan. 1, 1908.....				2047	
Number of owners of pure blood Bison, in America.....				45	
Number of owners of pure blood Bison, in Europe.....				19	

BUFFALO-DOMESTIC HYBRIDS, "CATTALOES"

	1907	1903
In the United States.....	260	243
In Canada.....	57	17
In Europe	28	21
Total on January 1, 1908.....	345	281

NOTES ON THE CENSUS.

THE CANADIAN BISON HERD.—The most important event of 1907 in the life history of the American Bison was the action of the Canadian Government in purchasing the entire Pablo-Allard herd of *six hundred and twenty-eight* animals, and transporting 398 of them to Elk Island Park, Canada. Of the 240 Bison still remaining on the Flathead range, all save 10 head belong to Canada, and will be removed during 1908. No enumeration of the sexes and the calves remaining in Montana has ever been made, and the division of the herd of 240 head into males, females and calves, as shown in this census, has been made by the rules of proportion, using the known quantities in the 398 head already taken to Canada, and reported upon by Howard Douglas.

Inasmuch as it was impossible to induce the United States Government to purchase the Pablo-Allard herd, and forever maintain it on the Flathead Reservation, the next best thing was that it should pass into the hands of the Canadian Government, and be located on the upper half of the former range of the species. In view of the breaking up of the Flathead Indian Reservation, and its opening to settlement, it was no longer possible for Mr. Pablo to maintain his herd, either there or elsewhere.

The Canadian Government deserves to be sincerely congratulated upon its wisdom, its foresight and its genuine enterprise in providing $157,000 for the purchase of the Pablo herd, in addition to the cost of transporting the animals, and fencing Elk Island Park. It is for the Canadians to write the full history of this important transaction, and record the names of the men who are entitled to the credit for the grand coup by which Canada secured for her people the finest herd of American Bison in the world. The friends of the Bison may indeed be thankful that the great northwestern herd is not to be scattered to the ends of the earth, and finally disappear in the unstable hands of private individuals.

THE CATTALO.—Every owner of a valuable herd of pure-blood Bison who feels inclined to experiment in the production of cattaloes, or crosses between the Bison

and domestic cattle, should first consider the possibility of seriously impairing the reputation and value of his Bison herd. If an owner is *willing to dedicate his herd* to the production of animals of mixed breed, that is his affair. It seems perfectly clear, however, that every Bison herd which contains cattaloes is bound to be regarded with doubt by persons who are seeking to purchase pure blooded Bison. In selecting calves for sale out of a mixed herd, it is not always possible for even the best experts to recognize a strain of domestic blood that exists in a supposedly pure-blooded animal. I could cite two instances in illustration of this, wherein calves that were sold as of pure blood afterward proved to be otherwise, and were therefore valueless.

It is a satisfaction to know that Col. C. J. Jones ("Buffalo" Jones), known to the world as the pioneer breeder of the cattalo, has received from the United States Government authority to use as a range an adequate amount of grazing grounds on the western side of the Grand Canyon of the Colorado, on which he has inaugurated the most important experiment in cross-breeding the Bison that ever has been made. The effort is devoted wholly to the production of cattaloes, and its results are awaited with keen interest. The moment Col. Jones finds a way to produce hybrids with ease and certainty, the future of the new breed is assured.

THE WILD BISON OF ATHABASCA.—I think it was in 1902 that the Canadian Government wisely enacted a law prohibiting the killing of any of the so-called "Wood Bison" that range in the uninhabited region immediately to the westward of Smith's Landing on the Athabasca River. While all unconcealed hunting ceased, it is probable that the Indians and half-breeds of that region killed many a Bison surreptitiously, for food. Two years ago it was reported that the gray wolves were devouring the young calves, because the Bison lived in such small bands that the bulls were unable to protect their young offspring.

Last year, Mr. Ernest Thompson Seton visited the region inhabited by the wild Bison of Athabasca, and saw 35 individuals, three of which were young calves. From

his observations, and facts gathered by him, he estimates the total number of Athabasca Bison at "not less than 250 nor more than 600. If I must fix upon a definite figure as my estimate, I will say 300." On this point, the following from Mr. Howard Douglas, Superintendent of the Rocky Mountain Park at Banff, dated October 28, 1907, is of general interest:—

"I have got the best information I can procure with regard to the herd running wild in the North, and regret having to report that they are decreasing, owing to the timber wolves killing the young calves, so that when there were supposed to be nearly six hundred head a few years ago, the estimate now is only about three hundred, with very little young stock among them, and unless drastic measures are taken soon there will be none left. The Government sent in an Inspector of the Northwest Mounted Police during the past Summer, and his report corroborates the statements made. From this report I have no doubt that some means will be taken to protect the herd in the future."

The Bison in the Yellowstone Park.—In his annual report for 1907 as Superintendent of the Yellowstone National Park, General S. B. M. Young reports as follows on the Bison, captive and wild:—

"The 29 Buffalo in the fenced pasture near Mammoth produced only 5 calves. One old cow in this herd died in June. The calves are hardy. This herd, with the exception of the two original old bulls, was safely conducted to the Lamar Valley on October 12 and 13, where there is superior grazing, and where they will be herded during the day time in fair weather and secured in the 600-acre pasture field during the night time and in foul weather. The grazing in the Mammoth pasture has not been excellent, and it has been necessary to feed hay to this herd all summer. The 28 Buffalo taken to the Lamar Valley in May last have not been fed hay and are in better condition than the Mammoth herd. The Lamar herd produced no calves. The united herd numbers 59 (25 males and 34 females), not including the 2 old bulls which have been advertised for sale.

"Of the original wild Buffalo in the park signs of 6 are reported on the Madison Plateau, southwest corner of the park; 4 were reported seen in Hayden Valley, their old habitat, in August, and signs of 15 are reported on Mirror Plateau and Specimen Ridge, 10 miles south of Soda Butte. Total number estimated to be 25."

NEW YORK, January 31, 1908. W. T. H.

CONSTITUTION OF THE AMERICAN BISON SOCIETY.

ARTICLE I.—NAME

The name of this organization shall be The American Bison Society.

ARTICLE II.—OBJECTS

The objects of this Society shall be the permanent preservation and increase of the American Bison.

ARTICLE III.—MEMBERSHIP

Section 1.—The membership of this Society shall consist of Associate Members, Members, Life Members, and Patrons.

Section 2.—Any person in sympathy with the objects of this Society may become an Associate Member by paying the prescribed dues.

Any person in sympathy with the objects of this Society may become a Patron, Life Member, or Member upon election by the Executive Committee and payment of the prescribed fees or dues.

Section 3.—The dues of an Associate Member shall be One Dollar, payable annually. The dues of a Member shall be five dollars, payable annually. The fee of a Life Member shall be one hundred dollars. The fee of a Patron shall be one thousand dollars.

Section. 4.—A member may be expelled from the Society upon the written recommendation of any officer, by a majority vote of the members of the Executive Committee present at any meeting, provided notice of such proposed action, with reasons therefor, be sent to the member and to the Executive Committee at least one week before such meeting.

ARTICLE IV.—GOVERNMENT

Section 1.—The governing body of this Society shall consist of a Board of Managers of twenty-seven persons, divided into three groups of nine each. The tenure of office of the Managers shall be three years, but only nine Managers' terms can expire by limitation in any one year. Therefore, at each annual meeting of the Society, nine new members shall be elected by ballot of a majority of the members present, due notice having been given in advance to all members.

Section 2.—The Board of Managers shall elect each year at its annual meeting, from its own members, by ballot and a majority vote, a President, two Vice-Presidents, Secretary, and Treasurer, and five persons to form, with the President and Secretary, the Executive Committee of the Society. Honorary officers, each to serve a term of one year, may be elected at the discretion of the Executive Committee.

Section 3.—Vacancies occurring in the Board of Managers and Executive Committee may be filled by the Executive Committee to complete the year in which they occur.

Section 4.—At the annual meeting a Nominating Committee, consisting of three members, shall be appointed by the presiding officer; their duties shall be to present a list of candidates to fill vacancies on the Board of Managers.

ARTICLE V.—DUTIES OF OFFICERS

Section 1.—The duties of the officers shall be such as pertain to their respective offices in similar societies. The President shall be ex-officio chairman of the Board of Managers and of the Executive Committee.

Section 2.—The Vice-Presidents shall perform the duties of the President, in his absence, in the order of seniority of office.

Section 3.—The Secretary shall record the proceedings of the Society of its Board of Managers, and of its Executive Committee, in books to be kept for the purpose; shall have charge of all records belonging to the Society, and of its publications; shall conduct the correspondence of the Society and keep a record thereof; shall inform members, Managers, and officers of their election; and shall give notice of all meetings, and inform the Managers and officers of all matters requiring their action.

Section 4.—The Treasurer shall collect all bills and assessments due the Society; shall pay from the funds of the Society all bills duly approved by the President, or by three members of the Executive Committee; shall send to the Secretary once a month the names and addresses of all new members He shall also furnish, at the request of the Executive Committee, a statement of the financial condition of the Society.

ARTICLE VI.—MEETINGS

Section 1.—There shall be an annual meeting of the Society, for the election of Managers and other general purposes, on the second Thursday of January.

Section 2.—Special meetings may be called upon seven days' notice by the President, or on a written application signed by three members of the Board of Managers, stating the object of said meeting.

Section 3.—The annual meeting of the Board of Managers shall be held immediately after the annual meeting of the members of the Society, and other meetings may be held at such times as the President or Executive Committee may deem desirable. Five members of the Board shall constitute a quorum.

Section 4.—Meetings of the Executive Committee may be held at such times and places as may be appointed by the President, or, in his absence, by the Secretary, and three days' notice of each meeting shall be given. Three members constitute a quorum.

Section 5.—The order of business shall be as follows:—

Reading records of previous meeting.
Reports of Committees.
Reading communications.
Unfinished business.
New business.

Cushing's Manual shall be the authority for the decision of disputed questions of order and debate.

ARTICLE VII.—AMENDMENTS

Amendments or alterations of the Constitution may be made by a two-thirds vote of a meeting of the Board of Managers at any meeting, provided written notice of the proposed change shall have been sent by mail to every member of the Board of Managers not less than seven days previous to said meeting.

MEMBERS OF THE

AMERICAN BISON SOCIETY.

LIFE MEMBERS.

BAYLIES, WALTER C.....Boston, Mass.
BREMER, Dr. J. L.....Boston, Mass.
BRINSMADE, CHARLES LYMAN.....Brooklyn, N. Y.
BRUCE, Miss M. W.....New York City
CARNEGIE, ANDREW.....New York City
*COLLARD, Mrs. GEORGE W.....New York City
CONARROE, Mrs. GEORGE N.....Philadelphia, Pa.
CORBIN, AUSTIN.....New York City
EDGELL, GEORGE S.....New York City
EISENBREY, Mrs. W. HARRISON.....Haverford, Pa.
INCHES, GEORGE B.....North Grafton, Mass.
*KENNARD, Mrs. MARTIN P.....Boston, Mass.
PHILLIPS, Dr. JOHN C.....Boston, Mass.
PHILLIPS, JOHN M.....Pittsburg, Pa.
PRATT, GEORGE D.....New York City
THAYER, EZRA RIPLEY.....Boston, Mass.
THAYER, Mrs. EZRA RIPLEY.....Boston, Mass.
THAYER, JOHN E.....Lancaster, Mass.
UNDERWOOD, WILLIAM LYMAN.....Belmont, Mass.
WADSWORTH, C. S.....Middletown, Conn.
WASHBURN, Hon. CHARLES G.....Worcester, Mass.
WILLIAMS, GIBSON T.....Buffalo, N. Y.
WOLCOTT, PRESCOTT.....Readville, Mass.

*Deceased.

MEMBERS.

ADAMS, BROOKS.....Quincy, Mass.
ADAMS, GEORGE E.....Chicago, Ill.
AIKEN, JOHN A.....Greenfield, Mass.
ALDRICH, CHARLES F.....Worcester, Mass.
ALLEN, C. L.....Worcester, Mass.
ALLEN, EDWARD JAY.....Philadelphia, Pa.
ALLEN, GLOVER M.....Cambridge, Mass.
ANDERSON, A. A.....New York City
BAACHUS, F. A.....Chicago, Ill.
BARTON, CHARLES S.....Worcester, Mass.
BASSETT, GEORGE M.....Worcester, Mass.
BAYNES, ERNEST HAROLD.....Meriden, N. H.
BELMONT, AUGUST, Jr.....New York City
BENKARD, T. H.....New York City
BENSON, ALEXANDER .....Philadelphia, Pa.
BIGELOW, HENRY B.....Cohassett, Mass.
BIGELOW, JOSEPH S.....Cohassett, Mass.
BLAKE, GEORGE F.....Worcester, Mass.
BLAKE, R. P.....Boston, Mass.
BLAKE, Miss SUSAN T.....Melrose, Mass.
BOAL, CHARLES T.....Chicago, Ill.
BOARDMAN, W. J.....Washington, D. C.
BONAPARTE, CHARLES J.....Baltimore, Md.
BOOTH, HENRY D.....
BOWDICH, CHARLES P.....Boston, Mass.
BRENCHAUD, J.....Yonkers, N. Y.
BRIDGHAN, JOSEPH.....E. Providence Centre, R. I.
BRIDGMAN, HERBERT L.....Brooklyn, N. Y.
BROOKS, JOHN HENRY.....Boston, Mass.
BROWN, F. F.....New York City
BROWN, LUTHER .....Worcester, Mass.
BUCHANAN, J. A.....Washington, D. C.
BULKELEY, JOSEPH R.....New York City
BUMPUS, Dr. H. C.....New York City
BURLEIGH, GEORGE W.....New York City
BURNHAM, JOHN A.....Boston, Mass.
BURTON, ARIEL .....Deephaven, Minn.
CABOT, CHARLES M.....Boston, Mass.
CABOT, W. R.....Boston, Mass.
CAESAR, HENRY A.....New York City
CAMMANN, KATHARINE L.....New York City
CAREY, ARTHUR A.....Waltham, Mass.
CARNEGIE, T. MORRIS.....New York City
CAVE, EDWARD .....New York City
CHAMPOLLION, ANDRE.....New York City
CHANLER, JOHN ARMSTRONG.....Cobham, Va.
CHASE, W. H.....Leominster, Mass.
CHAUNCEY, CHARLES.....Philadelphia, Pa.
CLARK, Miss F.....Philadelphia, Pa.
CLEMENT, HAZEN .....Boston, Mass.
COATES, WILLIAM M.....Philadelphia, Pa.
COFFIN, W. E.....New York City
COLLINS, PALMER .....Pittsburg, Pa.
CONVERSE, JOHN H.....Philadelphia, Pa.

COOLIDGE, HAROLD J. ..... Boston, Mass.
COOLIDGE, J. T. ..... Boston, Mass.
COX, JOHN LYMAN ..... Philadelphia, Pa.
CRANE, ALBERT ..... Stamford, Conn.
CROSBY, MAUNSELL S. ..... Rhinebeck, N. Y.
DALTON, C. H. ..... Boston, Mass.
DANIELS, F. H. ..... Worcester, Mass.
DAVIS, EDWARD L. ..... Worcester, Mass.
DAVIS, Mrs. H. C. ..... Philadelphia, Pa.
DEGENER, I. F. ..... New York City
DERBY, ROGER ALDEN ..... New York City
DEWEY, FRANCIS ..... Worcester, Mass.
DEWEY, GEORGE F. ..... Worcester, Mass.
DICH, Mrs. E. R. ..... New York City
DIENST, A. P. ..... New York City
DIMON, HAMPTON ..... Philadelphia, Pa.
DOOLY, JOHN E. ..... Salt Lake City, Utah
DUMONT, WILLIAM C. ..... New York City
DUTCHER, WILLIAM ..... New York City
DYCHE, Prof. L. L. ..... Lawrence, Kansas
EATON, FRANCIS G. ..... St. Louis, Mo.
EATON, HOWARD ..... Wolf, Wyoming
EDWARDS, H. A. ..... Albany, N. Y.
ELROD, Prof. MORTON J. ..... Missoula, Mont.
EMERSON, NATHANIEL W. ..... Boston, Mass.
ESTABROOK, A. T. ..... Boston, Mass.
EUSTIS, F. A. ..... Boston, Mass.
EVANS, WINTHROP R. ..... Everett, Mass.
EVERETT, Dr. O. H. ..... Worcester, Mass.
FAY, WALDO ..... Southboro, Mass.
FISHER, L. G. ..... Chicago, Ill.
FITZGERALD, DESMOND ..... Boston, Mass.
FORBES, ALEXANDER ..... Milton, Mass.
FREEMAN, Miss HARRIET E. ..... Boston, Mass.
FRENCH, F. H. ..... Davenport, Iowa
GAGE, Dr. HOMER ..... Worcester, Mass.
GAGE, T. H. ..... Worcester, Mass.
*GARDINER, Dr. EDWARD G. ..... Boston, Mass.
GARRETTSON, M. S. ..... New York City
GEDGE, FRED ..... Chicago, Ill.
GEER, WALTER ..... New York City
GEER, Mrs. WALTER ..... New York City
GIBSON, Miss MARY K. ..... Philadelphia, Pa.
GOODFELLOW, Miss FLORENCE ..... New York City
GRANT, MADISON ..... New York City
GREEN, SAMUEL SWETT ..... Worcester, Mass.
GROTWICK, F. C. ..... Buffalo, N. Y.
HALL, DANIEL K. ..... New York City
HALLETT, WILLIAM RUSSELL ..... Boston, Mass.
HARBISON, W. A. ..... Pittsburg, Pa.
HARNISHFEGER, PHILLIP ..... New York City
HARTLEY, Mrs. HOWARD ..... Pittsburg, Pa.
HARTLEY, Mrs. MARCELLUS ..... New York City
HARRINGTON, JOHN W. ..... Worcester, Mass.
HARROWER, Dr. DAVID ..... Worcester, Mass.
HAWLEY, E. S. ..... Buffalo, N. Y.
HECKSCHER, A. ..... New York City
HENRY, J. H. ..... Lincoln, N. H.
HENSHAW, JOHN ..... Providence, R. I.
HENSHAW, STANLEY ..... Greenville, Miss.
HERSCHEL, CLEMENS ..... New York City

HILL, SPENCER R. ..... Boston, Mass.
HODGE, Prof. CLIFTON F. ..... Worcester, Mass.
HOOPER, Prof. FRANKLIN W. ..... Brooklyn, N. Y.
HORNADAY, Dr. WILLIAM T. ..... New York City
HOUGHTON, CLEMENT S. ..... Boston, Mass.
HUBBARD, ELLIOT ..... Boston, Mass.
HUMPHREY, W. Y. ..... Pittsburg, Pa
HUNT, ROBERT W. ..... Chicago, Ill.
HUTCHINSON, CHARLES L. ..... Chicago, Ill.
HUTCHINSON, JOHN P. ..... Georgetown, N. J.
HYDE, SEYMOUR J. ..... New York City
ISHAM, Mrs. R. N. ..... Chicago, Ill.
JACK, Dr. F. L. ..... Boston, Mass.
JACKSON, Prof. ROBERT F. ..... Cambridge, Mass.
JAQUES, HERBERT ..... Boston, Mass.
JAMISON, CHARLES A. ..... New York City
JEFFRIES, W. A. ..... Boston, Mass.
JONES, C. J. ..... Topeka, Kansas
JORDAN, Prof. DAVID STARR. ..... Palo Alto, Cal.
KAY, CHARLES de ..... New York City
KEEFE, J. S. ..... Chicago, Ill.
KEEM, THEODORE ..... New York City
KELSEY, A. WARREN ..... Philadelphia, Pa.
KENNARD, FREDERIC H. ..... Boston, Mass.
KENNEDY, Dr. HARRIS. ..... West Roxbury, Mass.
KENT, WILLIAM ..... Chicago, Ill.
KENYON, GEORGE M. ..... St. Paul, Minn.
KINNEY, A. B. F. ..... Worcester, Mass.
KREUTZMANN, Dr. HENRY. ..... San Francisco, Cal.
KUTTROFF, ADOLPH. ..... New York City
LAMONT, Mrs. DANIEL. ..... New York City
LANGDON, WOODBURY G., Jr. ..... New York City
LASELLE, CHESTER ..... Whitinsville, Mass.
LASELLE, JOSIAH ..... Whitinsville, Mass.
LATHROP, BRYAN ..... Chicago, Ill.
LAWRENCE, SAMUEL C. ..... Medford, Mass.
LEE, BLAIR ..... Silver Spring, Md.
LEVERETT, GEORGE V. ..... Boston, Mass.
LINCOLN, WALDO ..... Worcester, Mass.
LIPPINCOTT, S. P. ..... Wyncote, Pa.
*LLOYD, ANDREW J. ..... Boston, Mass.
LODGE, H. E. ..... Swampscott, Mass.
LONG, HARRY V. ..... Boston, Mass
LOWNDES, Mrs. LLOYD. ..... Cumberland, Md.
LUCAS, FREDERICK A. ..... Brooklyn, N. Y.
LYMAN, FRANK ..... New York City
McCALL, RICHARD ..... Philadelphia, Pa.
McCREA, W. S. ..... Chicago, Ill.
MARBLE, J. R. ..... Worcester, Mass.
MARSHALL, C. S. ..... Worcester, Mass.
MARTIN, G. A. ..... Franklin, Mass.
MELLON, W. L. ..... Pittsburg, Pa.
MERRICK, J. VAUGHN, Jr. ..... Roxborough, Pa.
MILLER, C. L. ..... Pittsburg, Pa
MORGAN, PAUL ..... Worcester, Mass.
MORSE, Miss FRANCES R. ..... Boston, Mass.
MURPHY, FRANKLIN, Jr. ..... Newark, N. J.
NICOLA, F. F. ..... Pittsburg, Pa.
OLCOTT, DUDLEY ..... Albany, N. Y.
OLMSTEAD, W. H. B. ..... Roslindale, Mass.
OSBORN, Prof. HENRY F. ..... New York City

PAIGE, CALVIN D.....Southboro, Mass.
PALMER, Dr. T. S.....Washington, D. C.
PALMER, WILLIAM J.....Chicago, Ill
PARKER, Gen. DAINGERFIELD, U. S. A.....Washington, D. C.
PARKER, E. L.....Concord, Mass.
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